

Ref: 02343-05001-32003

August 3, 2006

Dr. Richard Mani 8 Pelican Point Road Belvedere, CA 94920

Re: Quarterly Groundwater Monitoring Report – Second Quarter 2006, Mani Site, 200 Talmadge Drive, Santa Rosa, California, NCRWQCB Case No. 1TSR279

Dear Dr. Mani:

This report presents Winzler & Kelly Consulting Engineers' (Winzler & Kelly's) results of the second quarter 2006 groundwater monitoring and sampling performed on June 13 and 15, 2006, at the site located at 200 Talmadge Drive, Santa Rosa, California (Figures 1 and 2). Additionally, an update of the remedial system is provided.

SECOND QUARTER GROUNDWATER MONITORING AND SAMPLING ACTIVITIES

The Site-Specific Sampling Procedures, provided in Appendix A, describe in detail all of the monitoring and sampling activities that were performed at the site on June 13 and 15, 2006. A brief summary of these activities is also provided below.

FIELD ACTIVITIES

Personnel Present: Winzler & Kelly's Environmental Engineer, Pon Xayasaeng, and

Environmental Scientist, Lenny Laskowsky, performed all the groundwater

monitoring and sampling activities.

Dissolved Oxygen: On June 13, 2006, dissolved oxygen (DO) concentrations were measured in

each monitoring well at the site. The measurements were obtained using a

calibrated DO meter while the biosparge system was operating.

Biosparge Shutdown: On June 13, 2006, the biosparge system was shutdown following DO

measurements to allow groundwater levels to equilibrate.

Depth-to-Water: The depth-to-groundwater (DTW) was measured in each monitoring well

(MW-1, MW-2, MW-4, MW-5 and MW-6) on June 13, 2006, while the

biosparge system was operating. DTW was measured again on June 15, 2006, while the biosparge system was not operating and after groundwater levels had equilibrated to atmospheric pressure for at least 30 minutes. The measurements were obtained using an electronic water level meter. A copy of the Water Level

Measurement Data Sheet is provided in Appendix B.



Purging: On June 15, 2006, an electronic 12-volt 1.5-inch submersible pump was used to

purge each monitoring well at the site. Copies of the Well Sampling Data Sheets

are provided in Appendix B.

Groundwater Sampling: Groundwater samples were collected on June 15, 2006, from each monitoring

well at the site. New disposable bailers were used to collect and transfer the groundwater samples from each monitoring well into the appropriate,

laboratory-supplied, certified clean sample containers.

Chemical Analysis: Analytical Sciences Laboratory (Analytical Sciences) of Petaluma, California (a

California-certified laboratory) analyzed the groundwater samples for total petroleum hydrocarbons as gasoline (TPH-G) and as diesel (TPH-D) by EPA Method 8015M, for benzene, toluene, ethyl benzene, and total xylenes (BTEX) and oxygenated fuel additives by EPA Method 8260B, for nitrate as nitrogen, nitrite as nitrogen, and phosphate by EPA Method 300, and for ammonia as

nitrogen by EPA Method 350.3.

Nutrient Injection: A total of five nutrient injections have been performed at the site. The fifth

nutrient injection was performed on June 30, 2006. Five pounds of potassium nitrate was mixed with 5 gallons of carbon-filtered water and injected into sparge points SP-2, SP-3, SP-4, and SP-5. Twenty gallons of carbon-filtered water was injected into each sparge point, following the nutrient solution.

Nutrient Monitoring: On August 4, 2006, grab groundwater samples were collected and submitted to

Analytical Sciences for analysis of nitrate as nitrogen and nitrite as nitrogen by EPA Method 300. Nutrient concentrations will be reported in the next quarterly

groundwater monitoring report (third quarter 2006).

SECOND QUARTER 2006 GROUNDWATER MONITORING AND SAMPLING RESULTS

The groundwater elevation data and groundwater flow direction are presented in Tables 1 and 2. A groundwater contour map illustrating the groundwater contours while the system was not operating on June 15, 2006, is provided as Figure 3. As shown on Figure 3, the groundwater is flowing towards the southwest at a gradient of 0.01 ft/ft.

On June 13, 2006, the DO concentrations measured in each well ranged from 2.10 to 12.65 mg/L. DO concentrations in monitoring wells MW-1, MW-4, and MW-6 are above background concentrations, which indicate that the biosparge system is effectively introducing oxygen into the aquifer. DO concentrations in MW-2 and MW-5 are slightly above background DO concentrations because these wells are on the perimeter of the sparge point's radius of influence. DO concentration results are summarized in Table 3.

Analytical results of the June 15, 2006 groundwater nutrient analysis indicated low levels of nitrate as nitrogen in each monitoring well except for MW-1, which reported nitrate as nitrogen at a concentration of 2.3 mg/L. This concentration is below the Maximum Contaminant Level (MCL) of 10 mg/L. Nitrite as nitrogen, ammonia as nitrogen, and phosphate were not detected in any of the monitoring wells sampled.



The rapid depletion of nutrients observed through analytical data, suggests an increase in microbial activity and aerobic digestion of petroleum hydrocarbons at the site. The analytical results are summarized in Table 4.

Analytical results of the June 15, 2006 sampling event reported petroleum related constituents above the laboratory's reportable detection limits (RDL) only in groundwater samples collected from MW-1 and MW-5. TPH-G, ethyl benzene, and total xylenes were reported in MW-1 at concentrations of 98, 2.5, and 1.7 µg/L, respectively. TPH-G and methyl tert-butyl ether (MTBE) were reported in MW-5 at concentrations of 120 and 2.2 µg/L, respectively. Concentrations reported, except for TPH-G, are below the Water Quality Objectives. Concentrations reported in the groundwater samples collected from MW-1 during the June 15, 2006 sampling event show a slight increase from the previous sampling event. This may be due to the combination of seasonal high groundwater levels and air sparging desorbing hydrocarbons from the vadose zone. Furthermore, the elevated solubility of hydrocarbons may be related to the increase in biological activity generated from the air injections.

Laboratory analyses of the groundwater samples collected on June 15, 2006, from monitoring wells MW-2, MW-4, and MW-6, did not quantify any petroleum related hydrocarbons above the laboratory's RDLs. The analytical results are summarized in Table 5. Figure 4 depicts the TPH-G, benzene, and MTBE concentrations that were detected in the groundwater samples collected on June 15, 2006.

The laboratory QA/QC included the use of method blanks to exclude false-positive analyses and the use of laboratory control samples to evaluate the percentage recovery of known analyte spikes. The recovery percentages for each of the sample analytes were within acceptable ranges. Constituents of concern (COCs) were not detected in the analysis of the trip blank. The complete laboratory report, QA/QC data, and the chain-of-custody form are included in Appendix C.

BIOSPARGE SYSTEM UPDATE

On June 13, 2006, Winzler & Kelly staff noted that the compressor pressure switch on the biosparge system began to show signs of failure. The biosparge system was turned off for the groundwater monitoring and sampling event and to repair the pressure switch. A new pressure switch was ordered and installed on June 21, 2006. The pressure switch was set at a range of 50-70 pounds square inch (psi) and the biosparge system was re-started.

Biosparge points SP-1 through SP-5 are currently operating for 60 minutes per cycle. The maximum sparge point injection pressure is set at approximately 20-24 psi and the air flow rate is set at 6.0 standard cubic foot per minute (scfm). The biosparge system has been operating as designed for approximately 680 days as of June 21, 2006. With the system shutdown for minor repairs, upgrades, and for sampling events the biosparge system has been operational for approximately 92% of the time since the start-up on June 9, 2004.

GEOTRACKER DATA ENTRY

As required by Assembly Bill AB2886, Winzler & Kelly has submitted their Annual Groundwater Monitoring Report Including First Quarter 2006 and the laboratory EDF report and the well measurement



file for the June 15, 2006 groundwater sampling event to the GeoTracker database. Copies of upload verifications are included in Appendix D. Winzler & Kelly will submit the lab data upon receipt and this report to the GeoTracker database upon completion.

CONCLUSIONS AND RECOMMENDATIONS

Biosparging in the area of MW-1 and MW-4 has significantly contributed to the decrease in COCs by enhancing microbial metabolization of the petroleum-related hydrocarbons. COCs in MW-4 have been non-detect for the past four quarters and COCs in MW-1 show a decreasing trend (Graphs 1 and 2). There is a slight increase of TPH-G in MW-1 during the June 15, 2006 sampling event which may be attributed to the increase in groundwater levels desorbing residual COCs from the smear zone.

With concurrence from the North Coast Regional Water Quality Control Board on May 9, 2006, an additional sparge point (SP-6) will be installed to enhance microbial metabolization of COCs in the area of MW-5. SP-6 will be extended from SP-5 using the existing junction box and piping at SP-5 and will be installed in accordance with the approved Winzler & Kelly August 2003 Remedial Action Plan and System Design procedures for sparge point installation. Sparge point installation activities are planned for the third quarter 2006.

Winzler & Kelly will continue to perform quarterly groundwater monitoring and sampling and nutrient injections activities at the site. The third quarter 2006 monitoring and sampling and nutrient injection events are scheduled for September 2006. A quarterly monitoring report will follow the monitoring and sampling event.

Should you have any questions or comments regarding this project, please contact Mr. David J. Vossler, Project Manager, at (707) 523-1010.

No.8228

Sincerely,

WINZLER & KELLY

Pon Xayasaeng

Environmental Engineer

Elizabeth A. Cargay, PG, REA

Senior Geologist

SC

Attachments



Figures:

Figure 1 – Vicinity Map

Figure 2 – Site Map

Figure 3 – Groundwater Contour Map

Figure 4 – Petroleum Hydrocarbon Concentrations in Groundwater

Tables:

Table 1 – Water Level Data and Well Construction Details

Table 2 – Groundwater Gradient and Flow Direction

Table 3 – Dissolved Oxygen and Indicator Parameters

Table 4 – Analytical Results of Nutrient Compounds

Table 5 – Analytical Results of Groundwater Samples

Graphs:

Graph 1 – TPH-G Concentrations vs. Groundwater Elevations Over Time in MW-1

Graph 2 - TPH-G Concentrations vs. Groundwater Elevations Over Time in MW-4

Appendices:

Appendix A – Site-Specific Sampling Procedures

Appendix B – Well Sampling Data Sheets

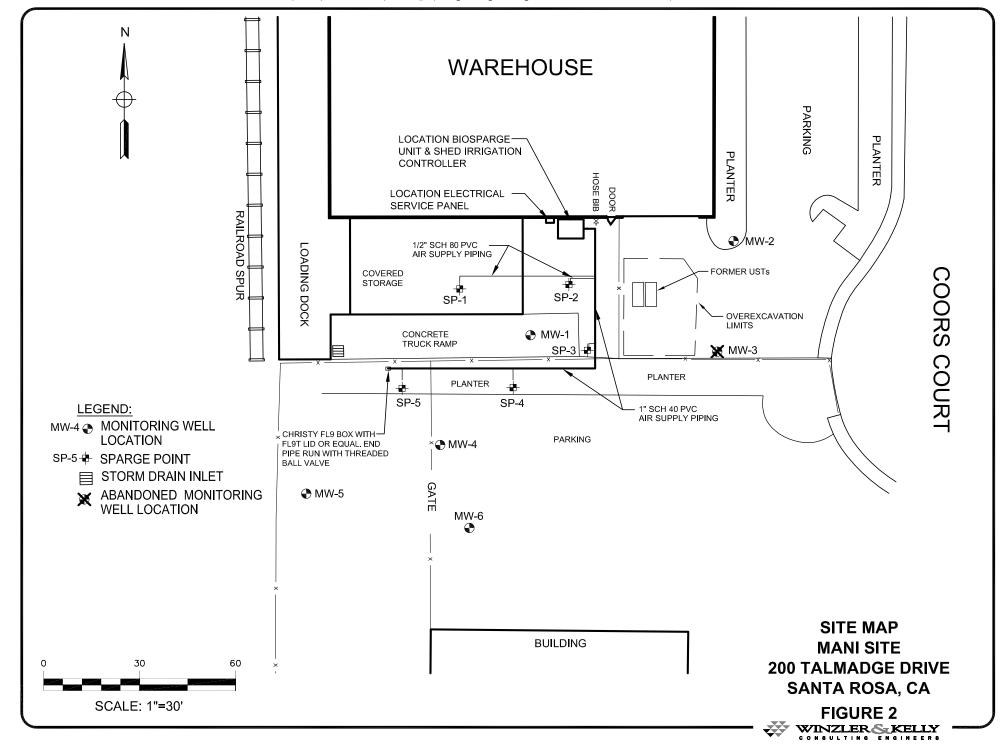
Appendix C – Analytical Laboratory Reports

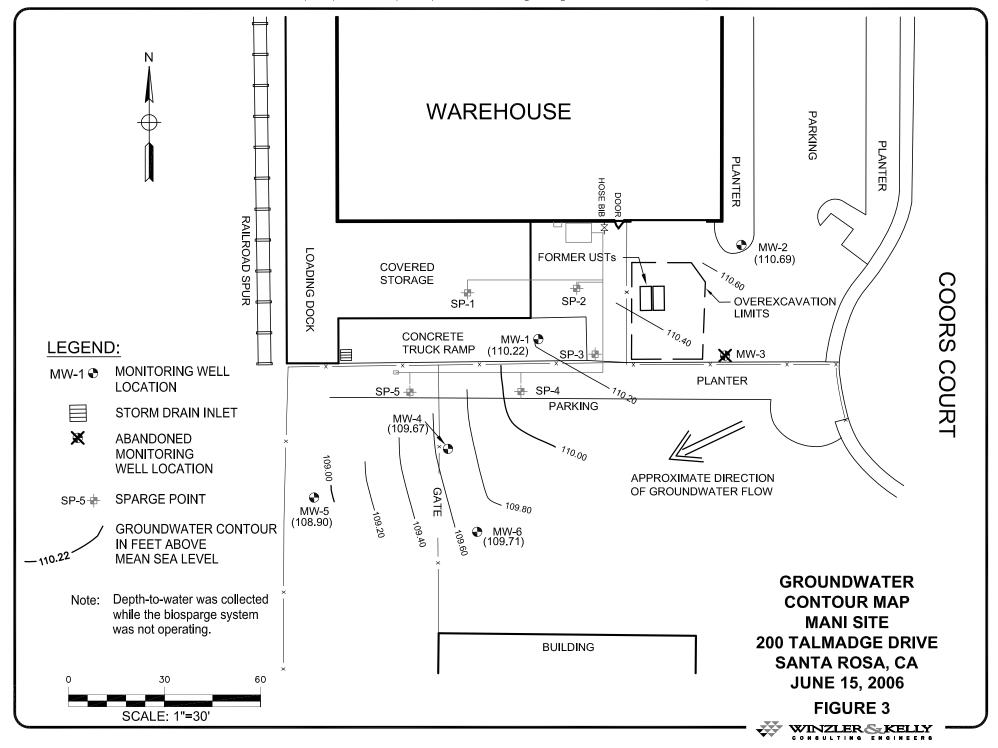
Appendix D – GeoTracker Upload Verifications

c: Mr. Jim Tischler, North Coast Regional Water Quality Control Board, 5550 Skylane Boulevard, Suite A, Santa Rosa, CA 95403

Mr. Don Wehr, 1839 Bella Vista Avenue, Santa Rosa, CA 95403







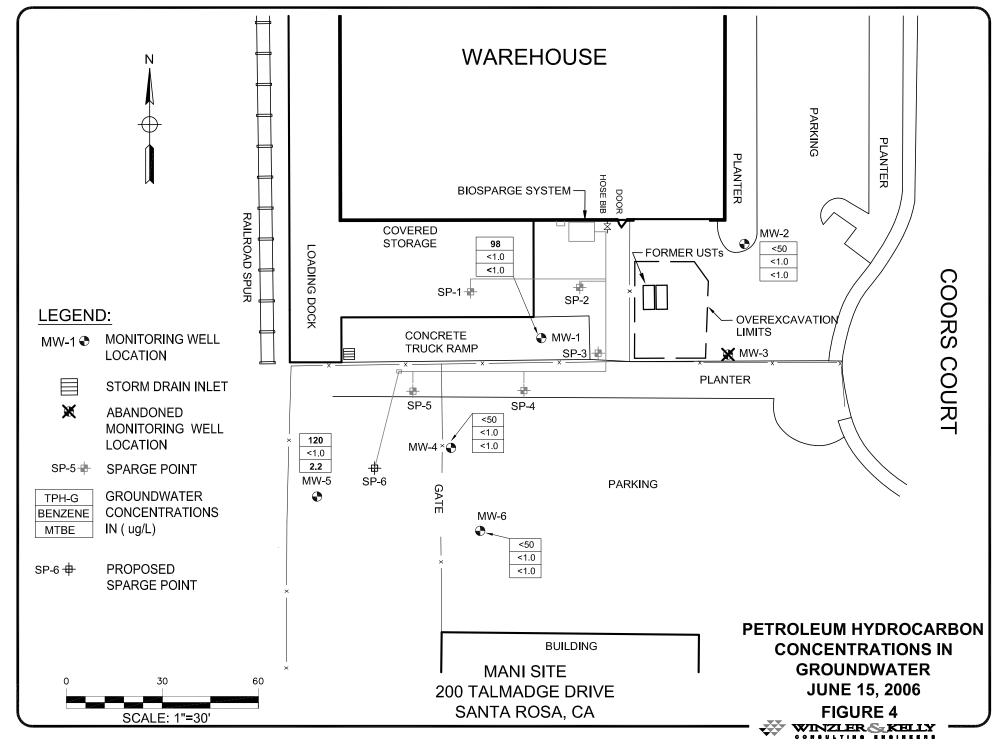




Table 1. Water Level Data and Well Construction Details

Mani Site

Well ID	Date	(Mean S	er Elevation ea Level)	_	o-Water	Top of Casing Elevation (Mean Sea Level)	Free Product Thickness	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval
		System On	System Off		1				eet	
MW-1	2/2/1995	NM	110.41	NM	8.25	118.66	-	10.0-25.0	8.0-25.0	6.0-8.0
	3/19/1998	NM	111.51	NM	7.15		-			
	9/9/1999	NM	106.31	NM	12.35		-			
	10/11/1999	NM	105.65	NM	13.01		-			
	11/17/1999	NM	105.24	NM	13.42		0.00			
	12/15/1999	NM	105.08	NM	13.58		0.00			
	1/12/2000	NM	104.77	NM	13.89		0.00			
	2/10/2000	NM	106.70	NM	11.96		0.00			
	3/15/2000	NM	111.09	NM	7.57		0.00			
	4/13/2000	NM	109.87	NM	8.79		0.00			
	5/12/2000	NM	109.41	NM	9.25		0.00			
	6/15/2000	NM	108.39	NM	10.27		0.00			
	7/14/2000	NM	107.24	NM	11.42	110.60	0.00			
	3/6/2001	NM	108.06	NM	10.63	118.69	0.00			
	6/6/2001	NM	106.70	NM	11.99		0.00			
	9/12/2001	NM	104.58	NM	14.11		0.00			
	12/13/2001	NM	106.28	NM	12.41		0.00			
	3/21/2002	NM NM	110.54	NM NM	8.15		0.00 NM			
	6/14/2002	NM NM	108.09 105.69	NM	10.60		NM NM			
	9/10/2002	NM NM		NM NM	13.00		NM NM			
	12/11/2002 3/25/2003	NM NM	104.81 109.76	NM NM	13.88 8.93		NM NM			
	6/27/2003	NM NM	109.76		9.62					
	10/1/2003	NM	106.05	NM NM	12.64		NM NM			
	12/12/2003			NM	12.45		NM			
	3/26/2004	NM NM	106.24 110.34	NM	8.35		NM			
	7/9/2004	NM	107.43	NM	11.26		NM			
	9/21/2004	NM NM	107.43	NM NM	13.06		NM NM			
	12/20/04 & 12/21/04	106.15	105.05	12.54	12.60		NM			
	3/16/05 & 3/17/05	110.60	110.58	8.09	8.11		NM			
	6/9/05 & 6/13/05	110.60	110.54	8.00	8.15		NM			
	9/28/05 & 9/29/05	106.88	107.44	11.81	11.25		NM			
	12/12/05 & 12/13/05	109.49	107.44	9.20	11.04		NM			
	3/21/06 & 3/22/06	111.98	111.77	6.71	6.92		NM			
	6/13/06 & 6/15/06	110.05	110.22	8.64	8.47		NM			
	*				*	•	•		•	•
MW-2	2/2/1995	NM	111.08	NM	9.27	120.35	-	10.0-25.0	8.0-25.0	6.0-8.0
	3/19/1998	NM	112.08	NM	8.27		-			
	9/9/1999	NM	106.72	NM	13.63		-			
	10/11/1999	NM	106.04	NM	14.31		-			
	11/17/1999	NM	105.59	NM	14.76		0.00			
	12/15/1999	NM	105.37	NM	14.98		0.00			
	1/12/2000	NM	105.04	NM	15.31		0.00			
	2/10/2000	NM	107.00	NM	13.35		0.00			
	3/15/2000	NM	111.39	NM	8.96		0.00			
	4/13/2000	NM	110.24	NM	10.11		0.00			
	5/12/2000	NM	109.80	NM	10.55		0.00			
	6/15/2000	NM	108.78	NM	11.57		0.00			
	7/14/2000	NM	107.64	NM	12.71		0.00			
	3/6/2001	NM	108.33	NM	12.04	120.37	0.00			
	6/6/2001	NM	107.05	NM	13.32		0.00			
	9/12/2001	NM	104.89	NM	15.48		0.00			
	12/13/2001	NM	106.54	NM	13.83		0.00			
	3/21/2002	NM	110.80	NM	9.57		0.00			
	6/14/2002	NM	108.45	NM	11.92		NM			
	9/10/2002	NM	106.07	NM	14.30		NM			
	12/11/2002	NM	105.11	NM	15.26		NM			
	3/25/2003	NM	110.10	NM	10.27		NM			
	6/27/2003	NM	109.55	NM	10.82		NM			
	10/1/2003	NM	106.47	NM	13.90		NM			
	12/12/2003	NM	106.62	NM	13.75		NM			
	3/26/2004	NM	110.68	NM	9.69		NM			
		NM	107.89	NM	12.48		NM			
	7/9/2004				14.33	l	NM			
	9/21/2004	NM	106.04	NM		1				
	9/21/2004 12/20/04 & 12/21/04	NM 106.49	106.40	13.88	13.97		NM			
	9/21/2004 12/20/04 & 12/21/04 3/16/05 & 3/17/05	NM 106.49 110.92	106.40 110.89	13.88 9.45	13.97 9.48		NM			
	9/21/2004 12/20/04 & 12/21/04 3/16/05 & 3/17/05 6/9/05 & 6/13/05	NM 106.49 110.92 111.07	106.40 110.89 110.98	13.88 9.45 9.30	13.97 9.48 9.39		NM NM			
	9/21/2004 12/20/04 & 12/21/04 3/16/05 & 3/17/05 6/9/05 & 6/13/05 9/28/05 & 9/29/05	NM 106.49 110.92 111.07 107.97	106.40 110.89 110.98 107.91	13.88 9.45 9.30 12.40	13.97 9.48 9.39 12.46		NM NM NM			
	9/21/2004 12/20/04 & 12/21/04 3/16/05 & 3/17/05 6/9/05 & 6/13/05	NM 106.49 110.92 111.07	106.40 110.89 110.98	13.88 9.45 9.30	13.97 9.48 9.39		NM NM			

Table 1. Water Level Data and Well Construction Details

Mani Site

Well ID	Date		er Elevation ea Level)	Depth-to	o-Water	Top of Casing Elevation (Mean Sea Level)	Free Product Thickness	Screen Interval	Sand Pack Interval	Bentonite/ Grout Interval
	ļ	System On	System Off	System On	System Off			fe	et	
MW-3	2/2/1995		110.52		9.47	119.99	-	10.0-25.0	8.0-25.0	6.0-8.0
	3/19/1998		111.41		8.58		-			
	9/9/1999		106.57		13.42		-			
	10/11/1999		105.89		14.10		-			
	11/17/1999		105.46		14.53		0.00			
	12/15/1999		105.25		14.74		0.00			
	1/12/2000		104.95		15.04		0.00			
	2/10/2000		106.88		13.11		0.00			
	3/15/2000		111.30		8.69		0.00			
	4/13/2000		110.12		9.87		0.00			
	5/12/2000 6/15/2000		109.66 108.64		10.33 11.35		0.00			
	7/14/2000		107.49		12.50		0.00			
	3/6/2001		108.24		11.77	120.01	0.00			
	6/6/2001		106.93		13.08		0.00			
	9/12/2001		104.79		15.22		0.00			
	12/13/2001		106.42		13.59		0.00			
	1/24/2002	MW-3 Destro	•	•		•				•
	·									
MW-4	3/21/2002	NM	110.02	NM	7.90	117.92	NM	5.0-20.0	4.0-20.0	3.0-4.0
	6/14/2002	NM	107.27	NM	10.65		NM			1
	9/10/2002	NM	104.81	NM	13.11		NM			İ
	12/11/2002	NM	104.01	NM	13.91		NM			İ
	3/25/2003	NM	109.16	NM	8.76		NM			İ
	6/27/2003	NM	108.22	NM	9.70		NM			İ
	10/1/2003	NM	105.17	NM	12.75		NM			
	12/12/2003	NM	105.36	NM	12.56		NM			
	3/26/2004	NM	109.72	NM	8.20		NM			
	7/9/2004	NM	106.54	NM	11.38		NM			
	9/21/2004	NM 105.52	104.81	NM 12.40	13.11 12.45		NM NM			
	12/20/04 & 12/21/04 3/16/05 & 3/17/05	110.06	105.47 110.07	7.86	7.85		NM			
	6/9/05 & 6/13/05	110.08	110.07	7.84	7.83		NM			
	9/28/05 & 9/29/05	107.10	106.80	10.82	11.12		NM			
	12/12/05 & 12/13/05	107.27	107.12	10.65	10.80		NM			
	3/21/06 & 3/22/06	112.50	111.38	5.42	6.54		NM			
	6/13/06 & 6/15/06	109.54	109.67	8.38	8.25		NM			
MW-5	3/21/2002	NM	109.42	NM	8.21	117.63	NM	5.0-20.0	4.0-20.0	3.0-4.0
	6/14/2002	NM	106.53	NM	11.10		NM			
	9/10/2002	NM	103.99	NM	13.64		NM			
	12/11/2002	NM	103.21	NM	14.42		NM			
	3/25/2003	NM	108.53	NM	9.10 10.23		NM NM			
	6/27/2003 10/1/2003	NM NM	107.40 104.40	NM NM	13.23		NM			
	12/12/2003	NM	104.40	NM	12.98		NM			
	3/26/2004	NM	109.11	NM	8.52		NM			
	7/9/2004	NM	105.89	NM	11.74		NM			
ĺ	9/21/2004	NM	103.89	NM	13.55		NM			1
	12/20/04 & 12/21/04	104.97	104.90	12.66	12.73	1	NM			İ
ĺ	3/16/05 & 3/17/05	109.59	109.58	8.04	8.05	1	NM			1
	6/9/05 & 6/13/05	109.47	109.33	8.16	8.30	1	NM			İ
	9/28/05 & 9/29/05	106.13	106.05	11.50	11.58		NM			İ
	12/12/05 & 12/13/05	106.64	106.52	10.99	11.11		NM			1
	3/21/06 & 3/22/06	111.02	110.85	6.61	6.78		NM			1
	6/13/06 & 6/15/06	108.83	108.90	8.80	8.73		NM			
) m :	T	l	1	I		115.51		50.200	40.000	1 2010
MW-6	3/21/2002	NM	110.10	NM	7.46	117.56	NM	5.0-20.0	4.0-20.0	3.0-4.0
	6/14/2002	NM	107.52	NM	10.04		NM			İ
	9/10/2002	NM NM	105.12	NM NM	12.44		NM NM			1
	12/11/2002	NM NM	104.33	NM NM	13.23		NM NM			İ
	3/25/2003 6/27/2003	NM NM	109.29 108.45	NM NM	8.27 9.11		NM NM			1
	0/7///003	NM NM	108.45	NM NM	12.06		NM NM			İ
				NM NM	11.89		NM NM			
	10/1/2003		105.67		11.07	l				1
	10/1/2003 12/12/2003	NM	105.67		7 60		NM			
	10/1/2003 12/12/2003 3/26/2004	NM NM	109.87	NM	7.69 10.66		NM NM			
	10/1/2003 12/12/2003 3/26/2004 7/9/2004	NM NM NM	109.87 106.90	NM NM	10.66		NM			
	10/1/2003 12/12/2003 3/26/2004	NM NM	109.87	NM						
	10/1/2003 12/12/2003 3/26/2004 7/9/2004 9/21/2004	NM NM NM NM	109.87 106.90 105.13	NM NM NM	10.66 12.43		NM NM			
	10/1/2003 12/12/2003 3/26/2004 7/9/2004 9/21/2004 12/20/04 & 12/21/04	NM NM NM NM 105.72	109.87 106.90 105.13 105.65	NM NM NM 11.84	10.66 12.43 11.91		NM NM NM			
	10/1/2003 12/12/2003 3/26/2004 7/9/2004 9/21/2004 12/20/04 & 12/21/04 3/16/05 & 3/17/05	NM NM NM NM 105.72 110.19	109.87 106.90 105.13 105.65 110.19	NM NM NM 11.84 7.37	10.66 12.43 11.91 7.37		NM NM NM NM			
	10/1/2003 12/12/2003 3/26/2004 7/9/2004 9/21/2004 12/20/04 & 12/21/04 3/16/05 & 3/17/05 6/9/05 & 6/13/05	NM NM NM NM 105.72 110.19 NM	109.87 106.90 105.13 105.65 110.19 110.10	NM NM NM 11.84 7.37 NM	10.66 12.43 11.91 7.37 7.46		NM NM NM NM			
	10/1/2003 12/12/2003 3/26/2004 7/9/2004 9/21/2004 12/20/04 & 12/21/04 3/16/05 & 3/17/05 6/9/05 & 6/13/05 9/28/05 & 9/29/05	NM NM NM NM 105.72 110.19 NM 107.16	109.87 106.90 105.13 105.65 110.19 110.10 106.96	NM NM NM 11.84 7.37 NM 10.40	10.66 12.43 11.91 7.37 7.46 10.60		NM NM NM NM NM			

Table 1. Water Level Data and Well Construction Details

Mani Site

200 Talmadge Drive, Santa Rosa, California

Well ID	Date	Groundwat (Mean S	er Elevation ea Level)	Depth-t	o-Water	Top of Casing Elevation (Mean Sea Level)	Free Product Thickness	Interval Interval		Bentonite/ Grout Interval
		System On	System Off	System On	System Off			fe	et	
SP-1	6/1/2004	NM	NM	NM	11.58	NM	NM	14-17	13.5-19.5	0-13.5
SP-2	6/1/2004	NM	NM	NM	11.41	NM	NM	20-23	19-23	0-19.0
SP-3	6/1/2004	NM	NM	NM	11.07	NM	NM	19-22	18.5-24	0-18.5
SP-4	6/1/2004	NM	NM	NM	10.29	NM	NM	19-22	18.5-22	0-18.5
SP-5	6/1/2004	NM	NM	NM	10.87	NM	NM	14.5-17.5	14-19.5	0-14.0

Abbreviations:
NM = Not Measured

Notes: Monitoring wells were resurveyed on March 13, 2001, and it was discovered that the top-of-casing elevations for MW-2 and MW-3 had been entered in the reverse order when the table was created. This table reflects the corrected top-of-casing elevations, and corresponding groundwater elevations for MW-2 and MW-3.

Table 2. Groundwater Gradient and Flow Direction

Mani Site

200 Talmadge Drive, Santa Rosa, California

Date	Groundwater Gradient (ft/ft)	Flow Direction	Wells used for Calculating Gradient and Flow Direction
2/2/1995	0.02	South 13 ⁰ West	MW-1, MW-2, MW-3
3/19/1998	0.02	South 5 ⁰ East	MW-1, MW-2, MW-3
9/9/1999	0.01	South 52 ⁰ West	MW-1, MW-2, MW-3
10/11/1999	0.01	South 50 ⁰ West	MW-1, MW-2, MW-3
11/17/1999	0.01	South 51 ⁰ West	MW-1, MW-2, MW-3
12/15/1999	0.01	South 47 ⁰ West	MW-1, MW-2, MW-3
1/12/2000	0.01	South 54 ⁰ West	MW-1, MW-2, MW-3
2/10/2000	0.01	South 49 ⁰ West	MW-1, MW-2, MW-3
3/15/2000	0.01	South 57 ⁰ West	MW-1, MW-2, MW-3
4/13/2000	0.01	South 55 ⁰ West	MW-1, MW-2, MW-3
5/12/2000	0.01	South 52 ⁰ West	MW-1, MW-2, MW-3
6/15/2000	0.01	South 52 ⁰ West	MW-1, MW-2, MW-3
7/14/2000	0.01	South 51 ⁰ West	MW-1, MW-2, MW-3
3/6/2001	0.01	South 55 ⁰ West	MW-1, MW-2, MW-3
6/6/2001	0.01	South 55 ⁰ West	MW-1, MW-2, MW-3
9/12/2001	0.01	South 56 ⁰ West	MW-1, MW-2, MW-3
12/13/2001	0.01	South 47 ⁰ West	MW-1, MW-2, MW-3
3/21/2002	0.01	West-Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
6/14/2002	0.02	West-Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
9/10/2002	0.02	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
12/11/2002	0.02	West-Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
3/25/2003	0.01	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
6/27/2003	0.01	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
10/1/2003	0.02	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
12/12/2003	0.02	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
3/26/2004	0.02	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
7/9/2004	0.01	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
9/21/2004	0.02	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
12/21/2004	0.01	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
3/17/2005	0.008	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
6/13/2005	0.02	West-Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
9/29/2005	0.008	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
12/13/2005	0.007 - 0.01	Southwest to West	MW-1, MW-2, MW-4, MW-5, MW-6
3/22/2006	0.008	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6
6/15/2006	0.01	Southwest	MW-1, MW-2, MW-4, MW-5, MW-6

<u>Note:</u> Monitoring wells were resurveyed on March 13, 2001, and it was discovered that the top-of-casing elevations for MW-2 and MW-3 had been entered in the reverse order when the table was created. This table reflects the corrected top-of-casing elevations, and corresponding groundwater elevations for MW-2 and MW-3. Elevations are relative to mean sea level.

Table 3. Dissolved Oxygen and Indicator Parameters

Mani Site

Well ID	Sample Date ^a	Dissolved Oxygen (mg/L)	ORP (mV)	pН	Conductivity b (uS/cm)	Temperatur (°F)
MW-1	9/10/2002			6.74	502	70.9
	12/11/2002			6.85	819	65.7
	3/25/2003	0.28		7.00	1053	65.2
	6/27/2003	0.28	-108	6.83	839	64.4
	10/1/2003	0.28	-35	7.00	883	65.8
	12/12/2003		-54	6.81	1007	66.0
	3/26/2004		-64	6.76	1039	64.0
	7/9/2004	0.50	-68	6.70	921	65.1
		Biosparge Sy	stem Start-up Aft	er 7/9/04 Monitor	ing Event	
	9/20/04 & 9/21/04*	0.33	-34	6.97	825	66.7
	12/20/04 & 12/21/04*	0.74	-54	6.91	891	66.9
	2/24/2005	c				
	Biosparge sys	tem compressor i	upgrade on 3/1/05.	Air flow rate inc	reased from 3.0 to 6	.0 scfm.
	3/16/05 & 3/17/05*	9.09	4	6.84	835	65.1
	6/9/05 & 6/13/05*	9.03		6.86 ^e	723 ^e	68.8 ^e
	9/28/05 & 9/29/05*	8.38	201	7.22	660	68.0
	12/12/05 & 12/13/05*	7.54	58	7.10	857	66.4
	3/21/06 & 3/22/06*	10.50	159	7.46	703	63.7
	6/13/06 & 6/15/06*	12.65	150	7.07	703	64.8
			•	•	•	-
MW-2	9/10/2002				Not Sampled	
	12/11/2002				Not Sampled	
	3/25/2003	0.41		6.50	650	66.7
	6/27/2003	0.70	147	6.62	612	65.8
	10/1/2003	0.92	205	6.63	648	67.5
	12/12/2003		232	6.63	655	68.2
	3/26/2004		250	6.26	612	65.5
	7/9/2004	1.88	222	6.50	578	66.4
	,,2001		stem Start-up Aft			33
	9/20/04 & 9/21/04*	0.58	173	6.64	572	68.4
	12/20/04 & 12/21/04*	0.50	228	6.42	587	68.2
	2/24/2005	0.78				
			upgrade on 3/1/05.	. Air flow rate inc	reased from 3.0 to 6	5.0 scfm.
	3/16/05 & 3/17/05*	0.64	203	6.30	619	66.0
						68 3 ^e
	6/9/05 & 6/13/05*	1.27		6.34 ^e	601 ^e	68.3 e 68.2
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05*	1.27 1.33	168	6.34 ^e 6.70	601 ^e 574	68.2
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05*	1.27 1.33 2.26	 168 175	6.34 ° 6.70 6.52	601 ^e 574 568	68.2 67.6
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06*	1.27 1.33 2.26 2.83	168 175 124	6.34 ° 6.70 6.52 6.78	601 ° 574 568 540	68.2 67.6 65.7
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05*	1.27 1.33 2.26	 168 175	6.34 ° 6.70 6.52	601 ^e 574 568	68.2 67.6
MW-3	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06*	1.27 1.33 2.26 2.83	168 175 124	6.34 ° 6.70 6.52 6.78	601 ° 574 568 540	68.2 67.6 65.7
MW-3	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06*	1.27 1.33 2.26 2.83	168 175 124	6.34 ° 6.70 6.52 6.78	601 ° 574 568 540 500	68.2 67.6 65.7
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed	1.27 1.33 2.26 2.83 3.50	168 175 124 205	6.34 ° 6.70 6.52 6.78	601 ° 574 568 540	68.2 67.6 65.7
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed	1.27 1.33 2.26 2.83 3.50	168 175 124 205	6.34 ° 6.70 6.52 6.78 6.59	601 ° 574 568 540 500 Not Measured d 732	68.2 67.6 65.7 65.1
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed	1.27 1.33 2.26 2.83 3.50	168 175 124 205	6.34 ° 6.70 6.52 6.78 6.59	601 ° 574 568 540 500 Not Measured d	68.2 67.6 65.7 65.1
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed 9/10/2002 12/11/2002 3/25/2003 6/27/2003	1.27 1.33 2.26 2.83 3.50	168 175 124 205	6.34 ° 6.70 6.52 6.78 6.59 6.69 7.00	601 ° 574 568 540 500 Not Measured d 732 868	68.2 67.6 65.7 65.1 66.3 64.7
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed 9/10/2002 12/11/2002 3/25/2003	1.27 1.33 2.26 2.83 3.50	168 175 124 205	6.34 ° 6.70 6.52 6.78 6.59 6.69 7.00 6.60	601 ° 574 568 540 500 Not Measured ^d 732 868 820	68.2 67.6 65.7 65.1 66.3 64.7 66.4
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed 9/10/2002 12/11/2002 3/25/2003 6/27/2003 10/1/2003 12/12/2003	1.27 1.33 2.26 2.83 3.50 0.27 0.20 0.29	 168 175 124 205	6.34 ° 6.70 6.52 6.78 6.59 6.69 7.00 6.60 6.74	601 ° 574 568 540 500 Not Measured ^d 732 868 820 802	68.2 67.6 65.7 65.1 66.3 64.7 66.4 69.6
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed 9/10/2002 12/11/2002 3/25/2003 6/27/2003 10/1/2003	1.27 1.33 2.26 2.83 3.50 0.27 0.20 0.29	 168 175 124 205 -94 -19 -533	6.34 ° 6.70 6.52 6.78 6.59 6.69 7.00 6.60 6.74 6.75	601 ° 574 568 540 500 Not Measured ^d 732 868 820 802 826	68.2 67.6 65.7 65.1 66.3 64.7 66.4 69.6 67.8
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed 9/10/2002 12/11/2002 3/25/2003 6/27/2003 10/1/2003 12/12/2003 3/26/2004	1.27 1.33 2.26 2.83 3.50 0.27 0.20 0.29 3.31	168 175 124 205	6.34 ° 6.70 6.52 6.78 6.59 6.69 7.00 6.60 6.74 6.75 6.55 6.60	601 ° 574 568 540 500 Not Measured ^d 732 868 820 802 826 886 740	68.2 67.6 65.7 65.1 66.3 64.7 66.4 69.6 67.8 64.0
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed 9/10/2002 12/11/2002 3/25/2003 6/27/2003 10/1/2003 12/12/2003 3/26/2004 7/9/2004	1.27 1.33 2.26 2.83 3.50 0.27 0.20 0.29 3.31	 168 175 124 205 -94 -19 -533 2	6.34 ° 6.70 6.52 6.78 6.59 6.69 7.00 6.60 6.74 6.75 6.55 6.60	601 ° 574 568 540 500 Not Measured ^d 732 868 820 802 826 886 740	68.2 67.6 65.7 65.1 66.3 64.7 66.4 69.6 67.8 64.0
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed 9/10/2002 12/11/2002 3/25/2003 6/27/2003 10/1/2003 12/12/2003 3/26/2004 7/9/2004	1.27 1.33 2.26 2.83 3.50 0.27 0.20 0.29 3.31 Biosparge Sy 0.35	168 175 124 205 94 -19 -533 2 -60 stem Start-up Aft -39	6.34 ° 6.70 6.52 6.78 6.59 6.69 7.00 6.60 6.74 6.75 6.55 6.60 er 7/9/04 Monitor 7.03	601 ° 574 568 540 500 Not Measured d 732 868 820 802 826 886 740 ing Event 633	68.2 67.6 65.7 65.1 66.3 64.7 66.4 69.6 67.8 64.0 67.5
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed 9/10/2002 12/11/2002 3/25/2003 6/27/2003 10/1/2003 12/12/2003 3/26/2004 7/9/2004 9/20/04 & 9/21/04* 12/20/04 & 12/21/04*	1.27 1.33 2.26 2.83 3.50 0.27 0.20 0.29 3.31 Biosparge Sy 0.35 0.69	168 175 124 205 94 -19 -533 2 -60 stem Start-up Aft -39 -1	6.34 ° 6.70 6.52 6.78 6.59 6.69 7.00 6.60 6.74 6.75 6.55 6.60 er 7/9/04 Monitor	601 ° 574 568 540 500 Not Measured ^d 732 868 820 802 826 886 740 ring Event	68.2 67.6 65.7 65.1 66.3 64.7 66.4 69.6 67.8 64.0 67.5
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed 9/10/2002 12/11/2002 3/25/2003 6/27/2003 10/1/2003 12/12/2003 3/26/2004 7/9/2004 9/20/04 & 9/21/04* 12/20/04 & 12/21/04* 2/24/2005	1.27 1.33 2.26 2.83 3.50 0.27 0.20 0.29 3.31 Biosparge Sy 0.35 0.69 0.30	168 175 124 20594 -19 -533 2 -60 stem Start-up Aft -39 -1	6.34 ° 6.70 6.52 6.78 6.59 6.69 7.00 6.60 6.74 6.75 6.55 6.60 er 7/9/04 Monitor 7.03 7.02	601 ° 574 568 540 500 Not Measured ^d 732 868 820 802 826 886 740 ring Event 633 638	68.2 67.6 65.7 65.1 66.3 64.7 66.4 69.6 67.8 64.0 67.5
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed 9/10/2002 12/11/2002 3/25/2003 6/27/2003 10/1/2003 12/12/2003 3/26/2004 7/9/2004 9/20/04 & 9/21/04* 12/20/04 & 12/21/04* 2/24/2005 Biosparge sys	1.27 1.33 2.26 2.83 3.50 0.27 0.20 0.29 3.31 Biosparge Sy 0.35 0.69 0.30 tem compressor in	168 175 124 205 94 -19 -533 2 -60 stem Start-up Aft -39 -1 upgrade on 3/1/05	6.34 ° 6.70 6.52 6.78 6.59 6.69 7.00 6.60 6.74 6.75 6.55 6.60 er 7/9/04 Monitor 7.03 7.02 Air flow rate inc	601 ° 574 568 540 500 Not Measured ^d 732 868 820 802 826 886 740 ring Event 633 638 reased from 3.0 to 6	68.2 67.6 65.7 65.1 66.3 64.7 66.4 69.6 67.8 64.0 67.5
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed 9/10/2002 12/11/2002 3/25/2003 6/27/2003 10/1/2003 12/12/2003 3/26/2004 7/9/2004 9/20/04 & 9/21/04* 12/20/04 & 12/21/04* 2/24/2005 Biosparge sys 3/16/05 & 3/17/05*	1.27 1.33 2.26 2.83 3.50 0.27 0.20 0.29 3.31 Biosparge Sy 0.35 0.69 0.30 tem compressor (4.55)	168 175 124 205 94 -19 -533 2 -60 stem Start-up Aft -39 -1 upgrade on 3/1/05	6.34 ° 6.70 6.52 6.78 6.59 6.69 7.00 6.60 6.74 6.75 6.55 6.60 er 7/9/04 Monitor 7.03 7.02 Air flow rate inc	Solution Solution	68.2 67.6 65.7 65.1 66.3 64.7 66.4 69.6 67.8 64.0 67.5 71.8 69.6
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed 9/10/2002 12/11/2002 3/25/2003 6/27/2003 10/1/2003 12/12/2003 3/26/2004 7/9/2004 9/20/04 & 9/21/04* 12/20/04 & 12/21/04* 12/20/05 Biosparge sys 3/16/05 & 3/17/05* 6/9/05 & 6/13/05*	1.27 1.33 2.26 2.83 3.50 0.27 0.20 0.29 3.31 Biosparge Sy 0.35 0.69 0.30 tem compressor t 4.55 6.85	168 175 124 205 94 -19 -533 2 -60 stem Start-up Aft -39 -1 upgrade on 3/1/05	6.34 ° 6.70 6.52 6.78 6.59 6.69 7.00 6.60 6.74 6.75 6.55 6.60 er 7/9/04 Monitor 7.03 7.02 Air flow rate inc 6.77 6.80 °	601 ° 574 568 540 500 Not Measured d 732 868 820 802 826 886 740 ring Event 633 638 reased from 3.0 to 6	68.2 67.6 65.7 65.1 66.3 64.7 66.4 69.6 67.8 64.0 67.5 71.8 69.6 .0 scfm.
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed 9/10/2002 12/11/2002 3/25/2003 6/27/2003 10/1/2003 12/12/2003 3/26/2004 7/9/2004 9/20/04 & 9/21/04* 12/20/04 & 12/21/04* 2/24/2005 Biosparge sys 3/16/05 & 3/17/05* 6/9/05 & 6/13/05* 9/28/05 & 9/29/05*	1.27 1.33 2.26 2.83 3.50 0.27 0.20 0.29 3.31 Biosparge Sy 0.35 0.69 0.30 tem compressor t 4.55 6.85 0.41	168 175 124 205 94 -19 -533 2 -60 stem Start-up Aft -39 -1 upgrade on 3/1/05.	6.34 ° 6.70 6.52 6.78 6.59 6.69 7.00 6.60 6.74 6.75 6.55 6.60 er 7/9/04 Monitor 7.03 7.02 Air flow rate inc 6.77 6.80 ° 7.50	601 ° 574 568 540 500 Not Measured d 732 868 820 802 826 886 740 ring Event 633 638 reased from 3.0 to 6 552 507 ° 514	68.2 67.6 65.7 65.1 66.3 64.7 66.4 69.6 67.8 64.0 67.5 71.8 69.6 3.0 scfm. 64.8 70.6 ° 71.4
	6/9/05 & 6/13/05* 9/28/05 & 9/29/05* 12/12/05 & 12/13/05* 3/21/06 & 3/22/06* 6/13/06 & 6/15/06* Well Destroyed 9/10/2002 12/11/2002 3/25/2003 6/27/2003 10/1/2003 12/12/2003 3/26/2004 7/9/2004 9/20/04 & 9/21/04* 12/20/04 & 12/21/04* 12/20/05 Biosparge sys 3/16/05 & 3/17/05* 6/9/05 & 6/13/05*	1.27 1.33 2.26 2.83 3.50 0.27 0.20 0.29 3.31 Biosparge Sy 0.35 0.69 0.30 tem compressor t 4.55 6.85	168 175 124 205 94 -19 -533 2 -60 stem Start-up Aft -39 -1 upgrade on 3/1/05	6.34 ° 6.70 6.52 6.78 6.59 6.69 7.00 6.60 6.74 6.75 6.55 6.60 er 7/9/04 Monitor 7.03 7.02 Air flow rate inc 6.77 6.80 °	601 ° 574 568 540 500 Not Measured d 732 868 820 802 826 886 740 ring Event 633 638 reased from 3.0 to 6	68.2 67.6 65.7 65.1 66.3 64.7 66.4 69.6 67.8 64.0 67.5 71.8 69.6 .0 scfm.

Table 3. Dissolved Oxygen and Indicator Parameters

Mani Site

200 Talmadge Drive, Santa Rosa, California

Well ID	Sample Date ^a	Dissolved Oxygen (mg/L)	ORP (mV)	рН	Conductivity b (uS/cm)	Temperature
MW-5	9/10/2002			6.96	659	70.9
	12/11/2002			6.62	635	66.6
	3/25/2003	0.26		7.00	799	64.0
	6/27/2003	0.21	-43	6.57	774	65.3
	10/1/2003	0.30	19	6.67	732	67.8
	12/12/2003		31	6.67	735	67.3
	3/26/2004		41	6.54	803	62.8
	7/9/2004	0.45	7	6.50	726	65.5
	1	Biosparge Sys	tem Start-up Aft	er 7/9/04 Monito	ring Event	
	9/20/04 & 9/21/04*	0.27	27	6.65	653	68.5
	12/20/04 & 12/21/04*	0.59	45	6.61	639	66.7
	2/24/2005	0.27				
	Biosparge sys	tem compressor u	pgrade on 3/1/05	. Air flow rate in	creased from 3.0 to 6	5.0 scfm.
	3/16/05 & 3/17/05*	0.60	530	6.56	598	63.1
	6/9/05 & 6/13/05*	0.35		6.77 ^e	603 ^e	67.5 ^e
	9/28/05 & 9/29/05*	0.40	16	6.80	530	68.9
	12/12/05 & 12/13/05*	1.77	0	6.78	526	66.6
	3/21/06 & 3/22/06*	2.23	17	6.93	517	62.6
	6/13/06 & 6/15/06*	2.10	26	6.85	507.7	64.9
MW-6	9/10/2002			6.88	612	69.9
	12/11/2002			6.44	563	68.2
	3/25/2003	0.28		7.00	653	65.5
	6/27/2003	0.39	178	6.61	610	66.9
	10/1/2003	0.58	208	6.69	646	69.4
	12/12/2003		263	6.68	661	69.3
	3/26/2004		222	6.44	605	64.4
	7/9/2004	0.54	225	6.51	580	67.5
	1	Biosparge Sys	tem Start-up Aft	er 7/9/04 Monito	ring Event	
	9/20/04 & 9/21/04*	0.56	176	6.57	572	70.2
	12/20/04 & 12/21/04*	3.10	212	6.52	558	69.3
	2/24/2005	3.74				
	Biosparge sys	tem compressor u	pgrade on 3/1/05	. Air flow rate in	creased from 3.0 to 6	5.0 scfm.
	3/16/05 & 3/17/05*	4.70	179	6.43	560	65.3
	6/9/05 & 6/13/05*	5.44		6.64 ^e	590 ^e	68.9 ^e
	9/28/05 & 9/29/05*	5.79	175	6.90	525	70.9
	12/12/05 & 12/13/05*	6.38	199	6.74	529	68.5
	3/21/06 & 3/22/06*	5.94	120	6.87	509	64.9
	6/13/06 & 6/15/06*	9.24	200	6.85	481.2	66.4

Notes:

- a = Tabulated indicator parameters were the last to be recorded from each well.
- b = The conductivity was incorrectly reported for the 9/10/2002, 12/11/2002, and 3/25/2003 reporting periods. The decimal points have been moved to show the correct values.
- c = DO was not measured because well was covered by a truck that could not be moved at the time DO was measured.
- $d = Well \ de\text{-watered} \ after \ purging} \ 0.75 \ gallons. \ Indicator \ parameters \ were \ not \ measured.$
- $e = A \; Hy dac \; meter \; was \; used \; to \; measure \; indicator \; parameters \; due \; to \; the \; unavailability \; of \; the \; Ultrameter.$
- * = During this sampling event, DO was measured on the first date while the system was on and the other indicator paramete were measured on the second date during purging activities.

Abbreviations:

 $mg/L = milligrams \ per \ liter$

ORP = oxidation/reduction potential

mV = millivolts

 $uS/cm = microSiemens\ per\ centimeter$

 ${}^{\mathrm{o}}F = degrees \; Fahrenheit$

--- = Measurements not taken

scfm = standard cubic foot per minute

Table 4. Analytical Results of Nutrient Compounds

Mani Site

		Analytic Method - EPA 300 (IC), SM 4500										
Well ID	Sample Date	Nitrate as Nitrogen	Nitrite as Nitrogen	Ammonia as Nitrogen	Phosphate (PO ₄)							
ID	Date	$(NO_3^{-1}-N)$	$(NO_2^{-1}-N)$	$(NH_4^{-1}-N)$	(PO ₄)							
	Ι Γ		m	g/L								
MW-1	5/8/2003	0.99	NA	NA	< 2.0							
	7/9/2004	< 0.10	< 0.10	< 0.15	< 0.50							
		em Start-up After	7/9/04 Monitoring									
	9/21/2004	< 0.15	< 0.15	0.37	<2.0							
		Injection 9/22/04		1								
	11/9/2004	< 0.50	NA	NA	NA							
	12/21/2004	< 0.10	<0.10	<0.2	< 0.50							
	3/17/2005	< 0.15	<0.15	<0.15	<1.0							
	6/13/2005	1.4	<0.15	< 0.15	<1.0							
		nt Injection 7/21/0		NT A	NT A							
	8/12/2005 ^a	2.0	0.0	NA	NA							
	9/29/2005 Third Nutrient	<0.50 E Injection 12/6/05	<0.5	< 0.2	< 0.50							
	12/13/2005	140	30	0.70	<2.0							
	1/9/2006	4.4	<0.10	NA	NA							
	3/22/2006	1.9	<0.10	<0.2	<0.2							
				owing sampling even								
	4/20/2006	2.2	< 0.10	NA	NA							
	6/15/2006	2.3	<0.10	<0.2	< 0.10							
		Injection perform		10.2	10.10							
		<u> </u>										
MW-2	5/8/2003	6.7	NA	NA	<2.0							
	7/9/2004	1.4	< 0.10	< 0.15	< 0.50							
	Biosparge Syst	em Start-up After	7/9/04 Monitoring	g Event								
	9/21/2004	1.3	< 0.15	< 0.15	<2.0							
	First Nutrient	Injection 9/22/04										
	11/9/2004	5.9	NA	NA	NA							
	12/21/2004	1.2	< 0.10	< 0.2	< 0.50							
	3/17/2005	2.0	< 0.15	< 0.15	<1.0							
	6/13/2005	1.7	< 0.15	< 0.15	<1.0							
		nt Injection 7/21/0	5									
	8/12/2005 ^a	0.5	0.0	NA	NA							
	9/29/2005	0.84	< 0.50	< 0.2	< 0.50							
		Injection 12/6/05		T								
	12/13/2005	3.5	<0.10	<0.2	<0.2							
	3/22/2006	1.2	<0.10	<0.2	<0.2							
				owing sampling even								
	4/20/2006	NA	NA 0.10	NA 0.2	NA 0.10							
	6/15/2006	1.3	<0.10	< 0.2	< 0.10							
	Fifth Nutrient	Injection perform	ea on 6/30/06.									
	MCI s =	CIIM 10 I	1.0	NT A	NT A							
	MCLs =	SUM = 10	1.0	NA	NA							

Table 4. Analytical Results of Nutrient Compounds

Mani Site

		Analytic Method - EPA 300 (IC), SM 4500										
Well	Sample	Nitrate as	Nitrite as	Ammonia as	Phosphate							
ID	Date	Nitrogen	Nitrogen	Nitrogen	(PO ₄)							
ID		$(NO_3^{-1}-N)$	$(NO_2^{-1}-N)$	$(NH_4^{-1}-N)$	(1 04)							
			n	ng/L								
MW-4	7/9/2004	< 0.10	< 0.10	< 0.15	< 0.50							
		em Start-up After	7/9/04 Monitorin	g Event								
	9/21/2004	0.17	< 0.15	< 0.15	< 2.0							
		Injection 9/22/04										
	11/9/2004	< 0.50	NA	NA	NA							
	12/21/2004	< 0.10	< 0.10	< 0.2	< 0.50							
	3/17/2005	< 0.15	< 0.15	< 0.15	<1.0							
	6/13/2005	<0.15	< 0.15	< 0.15	<1.0							
		nt Injection 7/21/05		T T	1							
	8/12/2005 ^a	2.0	0.0	NA	NA 0.50							
	9/29/2005	<0.50	< 0.50	< 0.2	< 0.50							
		Injection 12/6/05	0.02	1 02 1	2.0							
	12/13/2005	91	0.92	<0.2	<2.0							
	1/9/2006	1.8	NA	NA 0.2	NA 0.2							
	3/22/2006	0.37	<0.10	<0.2 owing sampling even	<0.2							
	4/20/2006	2.1	<0.10	NA NA	NA							
	6/15/2006	1.1	<0.10	<0.2	<0.10							
		Injection perform		<0.∠	<0.10							
	Then Nutrient	injection periorine	cu on 0/30/00.									
MW-5	7/9/2004	< 0.10	< 0.10	< 0.15	< 0.50							
1,1,,		em Start-up After			10.50							
	9/21/2004	<0.15	< 0.15	<0.15	<2.0							
		Injection 9/22/04										
	11/9/2004	3.0	NA	NA	NA							
	12/21/2004	< 0.10	< 0.10	< 0.2	< 0.50							
	3/17/2005	< 0.15	< 0.15	< 0.15	<1.0							
	6/13/2005	0.16	< 0.15	< 0.15	<1.0							
	Second Nutrient Injection 7/21/05											
	8/12/2005 ^a	0.0	0.0	NA	NA							
	9/29/2005	< 0.50	< 0.50	< 0.2	< 0.50							
	Third Nutrient	Injection 12/6/05										
	12/13/2005	< 0.50	< 0.10	< 0.2	< 0.2							
	1/9/2006	0.15	NA	NA	NA							
	3/22/2006	< 0.10	< 0.10	< 0.2	< 0.2							
	Fourth Nutrier		6) performed foll	owing sampling even	ıt.							
	4/20/2006	< 0.10	< 0.10	NA	NA							
	6/15/2006	0.36	< 0.10	< 0.2	< 0.10							
	Fifth Nutrient	Injection perform	ed on 6/30/06.									
	MCLs =	SUM = 10	1.0	NA	NA							

Table 4. Analytical Results of Nutrient Compounds

Mani Site

200 Talmadge Drive, Santa Rosa, California

		Aı	nalytic Method - E	PA 300 (IC), SM 450	00						
Well ID	Sample Date	Nitrate as Nitrogen (NO ₃ -1-N)	Nitrite as Nitrogen (NO ₂ -1-N)	Ammonia as Nitrogen (NH ₄ -1-N)	Phosphate (PO ₄)						
		-	n	ng/L							
MW-6	5/8/2003	5.8	NA	NA	< 2.0						
	7/9/2004	1.4	< 0.10	< 0.15	< 0.2						
	Biosparge Sys	tem Start-up After	7/9/04 Monitorin	g Event							
	9/21/2004	1.2	< 0.15	0.30	< 2.0						
	First Nutrient	Injection 9/22/04									
	11/9/2004	5.7	NA	NA	NA						
	12/21/2004	1.2	< 0.10	< 0.2	< 0.50						
	3/17/2005	1.8	< 0.15	< 0.15	<1.0						
	6/13/2005	1.6	< 0.15	< 0.15	<1.0						
	Second Nutrie	nt Injection 7/21/0	5								
	8/12/2005 ^a	2.0	0.0	NA	NA						
	9/29/2005	1.0	< 0.50	< 0.2	< 0.50						
	Third Nutrient Injection 12/6/05										
	12/13/2005	5.1	< 0.10	< 0.2	< 0.2						
	3/22/2006	1.4	< 0.10	< 0.2	< 0.2						
	Fourth Nutrie	nt Injection (3/22/0	06) performed foll	owing sampling even	ıt.						
	4/20/2006	1.7	< 0.10	NA	NA						
	6/15/2006	1.5	< 0.10	< 0.2	< 0.10						
	Fifth Nutrient	Injection perform	ed on 6/30/06.								
	MCLs =	SUM = 10	1.0	NA	NA						

Abbreviations:

mg/L = milligrams per liter

NA = Not analyzed

a = Concentrations of Nitrate and Nitrite were analyzed using Nitrate/Nitrite test strips in the field.

MCL = California Maximum Contaminant Levels

SUM = Sum of Nitrate as Nitrogen and Nitrite as Nitrogen

<u>Note:</u> 9/21/04 data is considered baseline for pre-nutrient injection. The first nutrient injection was completed 9/22/04, after 3rd quarter sampling.

Table 5. Analytical Results of Groundwater Samples

Mani Site

MW-1 2/2 4/6 3/19/ 9/9/ 12/15 3/15/ 7/14/ 3/67/ 6/6/6/ 9/12/ 12/13 3/21/ 6/14/ 9/10/ 12/11 3/25/ 5/8/ 6/27/ 10/1/ 12/12 3/26/ 7/9/2 9/21/ 12/13 3/17/ 6/13/ 9/29/ 12/13 3/22/	npled	8015M / 8020 8015M / 8020 5030/602/8260 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030/8015M/8260B	32,000 32,000 10,000 19,000 13,000 23,000 22,000 25,000 25,000 16,000 17,000 29,000 6,400 11,000 9,100 8,500 9,900 5,800 8,100 23,000 10,000 4,900 4,300 4,500 1,200 4,700 280 170 <50 98	2600 ° 2600 ° NA 1,400 1,600 2,600 1,600 880 2,990 470 ° 1,100 ° 4,100 ° 4,100 ° 3800 ° 3200 ° NA NA NA NA NA NA 1,800 ° 1,600 ° 1,200	3,600 1,400 1,300 1,400 1,300 1,400 920 1,300 1,700 980 1,400 370 1,400 400 370 1400 180 160 250 140 180 230 92 16 11 1.3 1.2 <1.0 <1.0 <1.0	6,600 1,500 1,500 1,500 1,000 220 410 360 240 310 140 560 200 150 85 120 210 450 220 330 380 140 38 38 38 38 38 38 38 3	1,300 560 770 360 1,400 970 1,400 2,200 1,300 980 1,900 740 860 500 600 860 790 1,100 1,800 90 90 After 7/9/4 150 22 10 4.44	1,600 1,600 2,900 1,100 3,400 2,600 3,100 4,400 1,800 1,800 1,440 1,700 940 840 1,780 2,700 2,700 5,290 2,200 880 04 Monitorin 66 63 32.3 7,9	NA NA NA 360 140 280 120 260 260 200 240 120 28 45 38 64 33 <10 19 36 33 20 22 g Event <10 <10 <11 <11 <11 <11 <11 <11 <11 <11	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND ND ND	ND ND ND ND ND ND ND ND	ND ND ND ND ND ND ND ND ND ND ND ND ND N	NA NA NA NA NA NA NA NA NA NA NA NA NA N
4/6 3/19/19 9/9/12 12/15 3/15/ 7/144 3/6/6 6/6/7 9/12/13 3/25/7 5/8/7 6/27/7 10/17 12/12 3/26/7 7/9/7 12/12 3/17/6 6/13/7 9/29/12 12/13 3/25/7 3/25/7 3/25/7 10/17 	76/95 77/1998 77/1999 77/1999 77/2000 77/2000 77/2001 77/2001 77/2002 77/2003 77/2003 77/2003 77/2003 77/2003 77/2004 77/2004 77/2004 77/2005 77/2005 77/2005 77/2005 77/2006	8015M / 8020 5030/602/8260 5030/602/8260 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	10,000 30,000 19,000 19,000 13,000 23,000 22,000 25,000 16,000 17,000 29,000 6,400 12,000 11,000 8,500 9,900 5,800 8,100 23,000 10,000 4,900 4,500 1,200 4,500 1,200 470 280 1700	NA 1,400 1,600 2,600 1,600 880 2,900 470 ° 1,100 ° 1,700 ° 2000 ° 3800 ° 3800 ° NA NA NA NA NA 1,800 ° 1,600 ° 1,200 ° 1,300 ° NA NA NA NA NA NA NA NA NA NA NA NA NA	1,400 1,300 570 1,400 1,300 1,400 920 1,300 1,700 980 730 1,400 370 140 280 140 280 140 250 140 180 92 40 180 92 40 180 92 40 180 92 40 180 92 40 180 92 40 180 92 40 180 92 40 180 92 40 180 92 40 80 81 80 81 82 82 83 84 84 85 84 86 86 87 88 88 88 88 88 88 88 88 88 88 88 88	1,500 1,000 1,000 220 410 360 240 310 140 96 560 2500 150 85 120 220 330 380 140 38 stem Start-u 1.6 <1.0 <1.0 <1.0	560 770 360 770 360 1,400 970 1,400 2,200 1,300 980 1,900 740 860 500 600 790 580 1,100 1,800 900 370 p After 7/9/4 150 37 25 22 10	1,600 2,900 1,100 3,400 2,600 3,100 4,400 1,800 1,800 4,000 1,440 1,700 940 840 1,780 2,020 1,350 2,700 5,290 2,200 880 04 Monitorin 281 167 66 32.3.2.3 7.9	NA 360 360 120 280 120 200 240 120 28 45 38 45 33 <10 19 20 20 g Event <10 <10 <1.4 <1.0	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND ND ND ND ND ND ND ND N	NA NA NA NA S50 S50 S0 S0 S0 S0 NA NA NA NA NA NA NA NA NA NA NA NA NA
3/19/ 9/9/ 12/15 3/15/ 3/15/ 7/14/ 3/6/ 6/6/ 9/12/ 12/13 3/21/ 6/14/ 9/10/ 12/11 3/25/ 5/8// 6/27/ 10/1/ 12/12 3/26/ 7/9/ 9/21/ 12/21 3/17/ 6/13/ 9/29/ 12/13 3/17/ 6/15/ MW-2 2/2 3/19/ 9/9/ 12/15 3/15/ 3/15/ 7/14/ 3/6/6/ 6/6/6/ 9/12/	0/1998 0/1999 1/1999 5/2000 1/2000 1/2000 1/2001 1/2001 1/2002 1/2002 1/2002 1/2002 1/2003 1/2003 1/2003 1/2003 1/2003 1/2004 1/2004 1/2004 1/2004 1/2005 1/2005 1/2005 1/2005	5030/802/8260 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	30,000 19,000 19,000 23,000 22,000 25,000 16,000 17,000 29,000 6,400 12,000 11,000 9,100 8,500 9,900 5,800 8,100 23,000 10,000 4,900 4,500 1,200 470 280 170 <50	1,400 1,600 1,600 880 2,900 470 ° 1,100 ° 4,100 ° 1,700 ° 3800 ° 3200 ° NA NA NA NA NA 1,800 ° 1,600 ° 1,200 ° 1,300	1,300 570 1,400 920 1,300 1,700 980 730 1,400 400 370 140 280 160 180 250 140 180 250 140 181 131 1.3 1.2 <1.0 <1.0	1,000 220 410 360 240 310 140 96 560 200 150 85 120 210 450 220 330 380 140 38 stem Start-u 11 1.6 <1.0 <1.0	770 360 1,400 1,400 970 1,400 2,200 1,300 980 1,900 740 860 500 600 860 790 580 1,100 1,800 900 370 9 After 7/9/4 150 37 25 22 10	2,900 1,100 3,400 2,600 3,100 4,400 1,800 4,000 1,440 1,700 940 840 1,780 2,020 1,350 2,700 5,290 2,200 880 04 Monitorin 281 167 66 63 32.3 7,9	360 140 280 120 200 260 240 120 28 45 38 64 33 <10 19 36 33 20 g Event <10 <10 <1.4 <1.0	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND ND ND ND ND ND ND ND N	NA NA NA NA S50 S50 S50 S50 S50 NA NA NA NA NA NA NA NA NA NA NA NA NA
9/9/ 12/15 3/15/ 3/15/ 7/14/ 3/6/ 6/6/ 9/12/ 12/13 3/21/ 6/14/ 9/10/ 12/11 3/25/ 5/8/ 6/27/ 10/1/ 12/12 3/26/ 7/9/2/ 12/13 3/17/ 6/13/ 9/29/ 12/13 3/22/ 6/15/ MW-2 2/2 3/19/ 9/9/ 12/15 3/15/ 7/14/ 3/6/ 6/6/ 9/12/	/1999 5/1999 5/1999 5/1999 5/2000 1/2000 1/2001 1/2001 1/2002 1/2002 1/2002 1/2002 1/2003 1/2003 1/2003 1/2003 1/2004 1/2004 1/2004 1/2004 1/2005 1/2005 1/2005 1/2005 1/2006	5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	19,000 13,000 13,000 23,000 22,000 25,000 16,000 17,000 29,000 6,400 12,000 11,000 9,100 8,500 9,900 5,800 8,100 23,000 10,000 4,900 4,300 4,300 4,500 1,200 470 280 170 <50	1,600 2,600 1,600 880 2,900 470 ° 1,100 ° 4,100 ° 1,700 ° 2000 ° 3800 ° NA NA NA NA NA 1,800 ° 1,600 ° 1,600 ° 1,700 °	570 1,400 920 1,300 1,700 980 1,400 400 370 140 280 160 250 140 180 230 92 40 Siosparge Sy 16 11 1.3 1.2 <1.0 <1.0	220 410 360 240 310 140 96 560 200 150 85 120 210 210 450 220 330 380 380 140 38 stem Start-u	360 1,400 970 1,400 2,200 1,300 980 1,900 740 860 500 600 860 790 580 1,100 1,800 900 370 9After 7/9/ 150 37 25 22 21	1,100 3,400 2,600 3,100 4,400 1,800 1,800 1,440 1,700 1,700 940 840 1,780 2,020 1,350 2,700 880 04 Monitorin 281 167 66 63 32.3	140 280 280 200 260 200 240 120 28 45 38 64 33 <10 19 36 33 20 22 g Event <10 <10 <1.0 <1.0 <1.0 <1.0	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND ND ND ND ND ND ND ND N	NA NA NA S S S S S S S S S S S S S S S S
12/15 3/15/7 3/1	5/1999 5/2000 1/2000 1/2001 1/2001 1/2001 1/2001 1/2001 1/2001 1/2002 1/2002 1/2002 1/2003 1/2003 1/2003 1/2003 1/2004 1/2004 1/2004 1/2004 1/2005 1/2005 1/2005 1/2005 1/2006	5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	13,000 23,000 23,000 25,000 16,000 17,000 29,000 6,400 12,000 11,000 9,100 8,500 9,900 5,800 8,100 23,000 10,000 4,900 4,500 1,200 470 280 170 <	2,600 1,600 1,600 880 2,900 470 ° 1,100 ° 1,700 ° 2000 ° 3800 ° 3800 ° 3200 ° NA NA NA NA 1,800 ° 1,600 ° 4,100 ° 1,700 ° 2,000 ° 1,700 ° 2,000 ° 1,7	1,400 920 1,300 920 1,300 980 730 1,400 400 370 140 280 160 250 140 180 230 92 40 3iosparge Sy 16 11 1.3 1.2 <.1.0 <.1.0	410 360 240 310 140 96 560 200 150 85 120 210 450 220 330 380 380 140 38 rstem Start-u 13 11 1.6 <1.0 <1.0	1,400 970 1,400 2,200 1,300 980 1,900 740 860 500 600 790 580 1,100 1,800 900 370 p After 7/9/4	3,400 2,600 3,100 4,400 1,800 1,800 1,440 1,700 940 840 1,780 2,020 1,350 2,700 5,290 2,200 880 04 Monitorin 281 167 66 32.3	280 120 200 260 200 240 120 28 45 38 64 33 <10 19 36 33 20 22 g Event <10 <10 <1.4 <1.0	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND ND ND ND ND ND ND ND N	NA
3/15/ 7/14/ 3/5/ 7/14/ 3/5/ 7/14/ 3/5/ 7/14/ 3/5/ 7/14/ 3/5/ 3/15/ 7/14/ 3/5/ 7/14/ 3/5/ 3/15/ 3	5/2000 1/2000 1/2000 1/2000 1/2000 1/2001 1/2001 1/2001 1/2001 1/2002 1/2002 1/2002 1/2003 1/2003 1/2003 1/2003 1/2004 1/2004 1/2004 1/2004 1/2004 1/2005 1/2005 1/2005 1/2006	5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	23,000 22,000 12,000 16,000 17,000 29,000 6,400 12,000 11,000 9,100 8,500 9,900 5,800 8,100 23,000 10,000 4,900 4,500 1,200 470 280 170 <50	1,600 880 2,900 470 ° 1,100 ° 1,100 ° 1,700 ° 2000 ° 3800 ° 3800 ° 3200 ° NA NA NA NA 1,800 ° 1,600 ° 1,700 °	920 1,300 1,700 980 730 1,400 400 370 140 280 140 250 140 180 92 40 3iosparge Sy 16 11 1.3 1.2 <1.0 <1.0	360 240 310 140 96 560 200 150 85 120 210 450 220 330 380 140 38 stem Start-u 1.6 <1.0 <1.0 <1.0	970 1,400 2,200 1,300 980 1,300 980 1,900 740 860 500 600 790 580 1,100 1,800 900 370 9 After 7/9/4 150 37 25 22	2,600 3,100 4,400 1,800 4,000 1,800 4,000 1,440 1,700 940 840 1,780 2,020 1,350 2,700 5,290 2,200 880 04 Monitorin 66 63 32.3 7,9	120 200 260 200 240 120 28 45 38 45 33 <10 19 36 33 20 22 g Event <10 <10 <10 <10 <10 <10 <10 <10	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND	ND ND ND ND ND ND Color (10) ND ND ND ND ND ND ND ND ND ND ND ND ND	ND ND ND ND ND ND ND ND ND ND ND ND ND N	<50 <50 <0.50 <0.50 <5.0 <10 NA NA NA <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10
7/14/ 3/6/5 6/6/7 9/12/ 12/13 3/21/ 6/14/ 9/10/ 12/11 3/25/ 5/8/7 6/27/ 10/11 12/12 3/26/7 7/9/7 9/21/ 12/21 3/16/13/ 9/29/ 12/13 3/19/ 9/9/ 12/13 3/19/ 9/9/ 12/13 3/19/ 9/9/ 12/13 3/19/ 9/9/ 12/13 3/19/ 9/9/ 12/13 3/19/ 9/9/ 12/13 3/19/ 9/9/ 12/13 3/19/ 9/9/ 12/13 3/19/ 9/9/ 12/13 3/15/ 3/15/ 3/15/ 7/14/ 3/6/6/ 6/6/6/	1/2000 1/2001 1/2001 1/2001 1/2001 1/2001 1/2001 1/2002 1/2002 1/2002 1/2002 1/2003 1/2003 1/2003 1/2003 1/2004 1/2004 1/2004 1/2004 1/2004 1/2005 1/2005 1/2005 1/2006 1	5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030/8015M/8260B	22,000 25,000 16,000 17,000 29,000 6,400 12,000 11,000 9,100 8,500 9,900 5,800 8,100 23,000 10,000 4,900 4,300 1,200 470 280 170	880 2,900 470 ° 1,100 ° 4,100 ° 1,700 ° 3800 ° 3200 ° NA NA NA NA 1,800 ° 1,600 ° 1,300 ° 1,600 ° 1,500 ° 1,	1,300 1,700 980 980 1,400 400 370 140 280 160 180 2250 140 180 230 40 3iosparge Sy 16 11 1.3 1.2 <1.0 <1.0	240 310 140 96 560 200 150 85 120 210 210 330 380 140 38 stem Start-u 13 11 1.6 <1.0 <1.0	1,400 2,200 1,300 980 1,900 740 860 500 600 860 790 580 1,100 1,800 900 370 p After 7/9/1 150 37 25 22 10	3,100 4,400 1,800 1,800 4,000 1,440 1,700 940 840 1,780 2,020 1,350 2,700 5,290 2,200 880 04 Monitorin 281 167 66 32.3 7.9	200 260 200 240 120 28 45 38 64 33 <10 19 36 33 20 22 g Event <10 <10 <1.0 <1.0 <1.0 <1.0	ND ND ND ND ND ND ND ND ND ND ND ND ND N	ND ND ND ND ND ND	ND ND ND ND ND ND	ND ND ND ND 131 ND 1410 200 250 250 250 250 250 250 250 250 25	<50 <0.50 <0.50 <0.50 <0.50 <5.0 <10 NA NA <10 <10 <10 <20 NA<
3/67/ 6/67/ 9/12/ 12/13 3/21/ 6/14/ 9/10/ 12/11 3/25/ 5/87/ 6/27/ 10/1/ 12/12 3/67/ 7/9/2 9/21/ 12/21 3/17/ 6/13/ 9/29/ 12/13 3/22/ 6/15/ MW-2 2/2 3/19/ 9/9/ 12/15 3/15/ 7/144 3/66/ 6/6/ 9/12/	/2001 /2001 /2001 /2001 /2001 /2000 /2000 /2002 /2002 /2002 /2003 /2003 /2003 /2003 /2004 /2004 /2004 /2004 /2004 /2005 /2005 /2005 /2005 /2006	5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	25,000 16,000 17,000 29,000 6,400 12,000 11,000 9,100 8,500 9,900 5,800 8,100 23,000 10,000 4,900 4,300 4,500 1,200 470 280 170 <50	2,900 470 ° 4,100 ° 4,100 ° 1,700 ° 2000 ° 3800 ° NA NA NA NA NA 1,800 ° 1,600 ° 1,200 ° 1,300 ° 1,500	1,700 980 730 1,400 400 370 1440 280 160 180 230 40 3iosparge Sy 16 11 1.3 1.2 <1.0 <1.0	310 140 96 560 200 150 85 120 210 450 220 330 380 380 1440 38 stem Start-u 13 11 1.6 <1.0 <1.0	2,200 1,300 980 1,900 740 860 500 860 790 580 1,100 1,800 900 1,100 1,800 900 37 25 22 10	4,400 1,800 1,800 1,800 4,000 1,440 1,700 940 840 1,780 2,020 1,350 2,700 5,290 2,200 880 04 Monitorin 281 167 66 32.3 7.9	260 200 240 120 28 45 38 64 33 <10 36 36 30 20 22 g Event <10 <10 <1.4 <1.0	ND ND ND ND <10 <10 <10 <10 <10 <10 <10 <10 <10 <10	ND ND ND ND ND ND ND	ND ND ND ND ND C10 C10 C10 C10 C10 C10 C10 C10 C10 C10	ND ND 31 ND <10 <200 <250 <250 <250 <250 <250 <250 <25	<0.50 <50 <0.50 <5.0 <10 NA NA <10 <10 <10 <20 NA <p< td=""></p<>
6/6/c/9/12/ 9/12/13 3/21/ 6/14/ 9/10/ 12/11 3/25/ 5/8/c 6/27/ 10/1/ 12/12 3/26/ 7/9/c 9/21/ 12/21 3/17/ 6/13/ 9/29/ 12/13 3/22/ 6/15/ MW-2 2/2 3/19/ 9/9// 12/15 3/15/ 7/14/ 3/6// 6/6// 9/12/	/2001 //2001 3/2001 3/2001 //2002 //2002 1/2002 1/2003 //2003 //2003 2/2003 1/2004 1/2004 1/2004 1/2004 1/2004 1/2005 3/2005 3/2005	5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	16,000 17,000 17,000 29,000 6,400 12,000 11,000 8,500 9,900 5,800 8,100 23,000 10,000 4,900 4,500 1,200 470 280 170 <50	470 ° 1,100 ° 1,100 ° 1,700 ° 2000 ° 3800 ° 3800 ° 3200 ° NA NA NA NA 1,800 ° 1,600 ° 420 ° 1,200 ° 130 ° <	980 730 1,400 400 370 140 280 160 250 140 230 92 40 3iosparge Sy 16 11 1.3 1.2 <1.0 <1.0	140 96 560 200 150 85 120 210 450 220 330 380 140 38 stem Start-u 13 11 1.6 <1.0 <1.0 <1.0	1,300 980 1,900 740 860 500 600 790 580 1,100 1,800 900 37 1,500 9 After 7/9/4 150 37 25 22 10	1,800 1,800 1,800 4,000 1,440 1,700 940 840 1,780 2,020 1,350 2,700 5,290 2,200 880 04 Monitorin 281 167 66 32.3 7.9	200 240 120 28 45 38 64 33 <10 19 36 33 20 22 g Event <10 <10 <1.4 <1.0	ND ND ND ND <10 <10 <10 <10 <10 <10 <10 <10 <10 <10	ND ND ND	ND ND ND <10 <10 <10 <10 <10 <10 <10 <10 <10 <10	ND 31 ND <10 <200 <100 <250 <250 <250 <250 <250 <250 <250 <2	<50 <0.50 <10 NA NA NA <10 <10 <10 <20 NA NA NA NA NA
9/12/ 12/13 3/21/ 6/14/ 9/10/ 12/11 3/25/ 5/87/ 6/27/ 10/1/ 12/12 3/26/ 7/9/ 9/21/ 12/21 3/17/ 6/13/ 9/29/ 12/13 3/17/ 6/15/ MW-2 2/2 3/19/ 9/9/ 12/15 3/15/ 3/15/ 7/14/ 3/6/6/ 6/6/ 9/12/	2/2001 3/2001 3/2001 3/2002 3/2002 3/2002 3/2002 1/2002 1/2003 1/2003 1/2003 1/2003 1/2004 1/2004 1/2004 1/2004 1/2005 1/2005 1/2005 1/2006 1/2006	5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	17,000 29,000 6,400 11,000 9,100 8,500 9,900 5,800 8,100 23,000 10,000 4,900 4,500 1,200 470 280 170 5,500	1,100 ° 4,100 ° 1,700 ° 2000 ° 3800 ° 3200 ° NA NA NA NA NA NA NA NA NA NA NA NA NA	730 1,400 400 400 370 140 280 140 250 140 180 92 40 3iosparge Sy 16 11 1.3 1.2 <1.0 <1.0	96 560 200 150 85 120 210 450 220 330 380 140 38 stem Start-u 11 1.6 <1.0 <1.0 <1.0	980 1,900 740 860 500 600 860 790 580 1,100 900 370 9 After 7/9/4 150 37 25 22	1,800 4,000 1,440 1,700 940 840 1,780 2,020 1,350 2,700 5,290 2,200 880 04 Monitorin 66 32.3 7.9	240 120 28 45 38 64 33 <10 19 36 33 20 20 g Event <10 <10 <1.4 <1.0	ND ND STORM	ND ND	ND ND ND <10 <10 <10 <10 <10 <10 <10 <10 <10 <10	31 ND <10 <200 <100 <250 <250 <25 <25 <25 <25 <25 <25 <25 <25	<0.50 <5.0 <5.0 <10 NA NA NA <10 <10 <10 <20 NA N
12/13 3/21/ 6/14/ 9/10/ 12/11 3/25/ 5/87/ 6/27/ 10/1/ 12/12 3/26/ 7/9/ 12/13 3/17/ 6/13/ 9/29/ 12/13 3/12/ 6/15/ MW-2 2/2 3/19/ 9/9/ 12/15 3/15/ 7/14/ 3/6// 6/6// 9/12/	3/2001 1/2002 1/2002 1/2002 1/2002 1/2003 1/2003 1/2003 1/2003 1/2004 1/2004 1/2004 1/2004 1/2005 1/2005 1/2005 1/2006	5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	29,000 6,400 12,000 11,000 9,100 8,500 9,900 5,800 8,100 23,000 10,000 4,900 4,300 1,200 470 280 170 <50	4,100 ° 1,700 ° 2000 ° 3800 ° 3800 ° NA NA NA NA 1,800 ° 1,600 ° 1 1,000 ° 290 ° 130 ° < 50 < 50 < 50	1,400 400 370 140 280 160 250 140 180 230 40 3iosparge Sy 16 11 1.3 1.2 <1.0 <1.0	560 200 150 85 120 210 210 330 380 140 38 stem Start-u 13 11 1.6 <1.0 <1.0	1,900 740 860 500 600 860 790 580 1,100 1,800 900 370 9 After 7/9/ 150 37 25 21	4,000 1,440 1,740 940 840 1,780 2,020 1,350 2,700 5,290 2,200 880 04 Monitorin 281 167 66 32.3 7,9	120 28 45 38 64 33 <10 19 36 33 20 22 g Event <10 <10 <1.0 <1.0 <1.0	ND <10 <10 <10 <10 <10 <10 <10 <10 <10 <10	ND <10 <10 <10 <10 <10 <10 <10 <10 <10 <10	ND <10 <10 <10 <10 <10 <10 <10 <10 <10 <10	ND <10 <200 <250 <250 <250 <250 <250 <250 <25	<5.0 <10 NA NA NA OR OR OR OR OR OR OR OR OR OR OR OR OR
3/21/ 6/14/ 9/10/ 12/11 3/25/ 5/87/ 6/27/ 10/1/ 12/12 3/26/ 7/9/2 9/21/ 12/12 3/17/ 6/13/ 9/29/ 12/13 3/22/ 6/15/ MW-2 2/2 3/19/ 9/9/ 12/15 3/15/ 3/15/ 6/6/ 9/12/	//2002 //2002 //2002 1/2002 1/2002 1/2003 //2003 //2003 1/2003 1/2003 1/2004 1/2004 1/2004 1/2004 1/2005 1/2005 1/2005 1/2005 1/2006	5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	6,400 12,000 11,000 9,100 8,500 9,900 5,800 8,100 23,000 10,000 4,900 4,300 4,500 1,200 470 280 170 <50	1,700 ° 2000 ° 3800 ° 3800 ° 3200 ° NA NA NA NA 1,800 ° 1,600 ° 1,200 ° 290 ° 130 °	400 370 140 280 160 250 140 180 230 92 40 3iosparge Sy 16 11 1.3 1.2 <1.0 <1.0	200 150 85 120 210 450 220 330 380 380 140 38 rstem Start-u 13 11 1.6 <1.0 <1.0 <1.0	740 860 500 600 860 790 580 1,100 1,800 900 37 150 9 After 7/9/0 150 37 25 22	1,440 1,700 940 840 1,780 2,020 1,350 2,700 5,290 2,200 880 94 Monitorin 281 167 66 32.3 7.9	28 45 38 64 33 <10 19 36 33 20 22 g Event <10 <10 <10	<10 <10 <10 <5.0 <5.0 <10 <10 <10 <10 <10 <10 <10 <10 <10 <1	<10 <10 <10 <5.0 <10 <10 <10 <10 <10 <10 <10 <10 <10 <1	<10 <10 <10 <5.0 <10 <10 <10 <10 <10 <10 <10 <10 <10 <1	<10 <200 <100 <200 <100 <250 <250 <250 <250 <250 <250 <500 <25 <250 <250	<10 NA NA NA VA <10 <10 <10 <10 NA NA NA NA NA NA NA NA NA NA NA NA NA
6/14/ 9/10/ 12/11 3/25/ 5/8/ 6/27/ 10/1/ 10/1/ 12/12 3/26/ 7/9/ 9/21/ 12/21 3/17/ 6/13/ 9/29/ 12/13 3/12/ 6/15/ MW-2 2/2 3/19/ 9/9/ 12/13 3/15/ 7/14/ 3/6/6/ 6/6/ 9/12/	\(\frac{1}{2}002\) \(\frac{1}{2}002\) \(\frac{1}{2}002\) \(\frac{1}{2}002\) \(\frac{1}{2}003\) \(\frac{1}{2}003\) \(\frac{1}{2}003\) \(\frac{1}{2}003\) \(\frac{1}{2}003\) \(\frac{1}{2}004\) \(\frac{1}{2}004\) \(\frac{1}{2}004\) \(\frac{1}{2}005\) \(\frac{3}{2}005\) \(\frac{3}{2}006\) \(\frac{3}{2}006\) \(\frac{3}{2}006\)	5030A/8260B/8015M 5030A/8260B/8015M 5030A/8260B/8015M 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	12,000 11,000 9,100 8,500 9,900 5,800 8,100 23,000 10,000 4,900 4,500 1,200 470 280 170 <50	2000 " 3800 " 3200 " NA NA NA NA NA 1,800 " 1,600 " 420 " 1200 " 290 " 130 "	370 140 280 160 250 140 180 230 92 40 3iosparge Sy 16 11 1.3 1.2 <1.0 <1.0	150 85 120 210 450 220 330 380 140 38 stem Start-u 13 11 1.6 <1.0 <1.0	860 500 600 860 790 580 1,100 1,800 900 370 p After 7/9/6 150 37 25 22	1,700 940 840 1,780 2,020 1,350 2,700 5,290 2,200 880 04 Monitorin 281 167 66 32.3 7.9	45 38 64 33 <10 19 36 33 20 22 g Event <10 <10 <10 <10 <10 <10 <10 <10	<10 <5.0 <10 <10 <10 <10 <10 <10 <10 <10 <10 <1	<10 <5.0 <10 <10 <10 <10 <10 <10 <10 <10 <10 <1	<10 <5.0 <10 <10 <10 <10 <10 <10 <10 <10 <10 <1	<200 <100 <250 <250 <250 <250 <255 <255 <250 <255 <255	NA NA NA <10 <10 <10 <20 NA NA NA NA NA NA NA NA NA
9/10/ 12/11 3/25/ 5/8/3 6/27/ 10/1/ 12/12 3/26/3 7/9/2 9/21/ 12/21 3/17/ 6/13/3 9/29/ 12/13 3/22/ 6/15/ MW-2 2/2 3/19/ 9/9/ 12/13 3/15/ 7/14/ 3/6// 6/6// 9/12/	0/2002 1/2002 1/2003 1/2003 1/2003 1/2003 1/2003 1/2004 1/2004 1/2004 1/2004 1/2004 1/2005 1/2005 1/2005 1/2005 1/2005 1/2005 1/2005 1/2006	5030A/8260B/8015M 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	11,000 9,100 8,500 9,900 5,800 8,100 23,000 10,000 4,900 4,500 1,200 470 280 170 <50	3800 ° 3200 ° NA NA NA NA NA 1,800 ° 1,600 ° 1,200 ° 290 ° 130 °	140 280 160 250 140 180 230 92 40 3iosparge Sy 16 11 1.3 1.2 <1.0 <1.0	85 120 210 450 220 330 380 140 38 stem Start-u 13 11 1.6 <1.0 <1.0	500 600 860 790 580 1,100 1,800 900 370 p After 7/9/0 150 37 25 22	940 840 1,780 2,020 1,350 2,700 5,290 2,200 880 94 Monitorin 281 167 66 32.3 7.9	38 64 33 	<5.0 <10 <10 <10 <10 <10 <10 <10 <10 <1.0 <1.	<5.0 <10 <10 <10 <10 <10 <10 <10 <10 <10 <1	<5.0 <10 <10 <10 <10 <10 <10 <10 <10 <10 <1	<100 <250 <250 <250 <250 <25 <25 <25 <250 <500 <25 <25 <250 <25 <250 <255 <255	NA NA <10 <10 <10 <10 <10 <na na="" na<="" td=""></na>
12/11 3/25/ 5/87/ 6/27/ 10/1/ 12/12 3/26/ 7/9/2 9/21/ 12/13 3/17/ 6/13/ 9/29/ 12/13 3/22/ 6/15/ MW-2 2/2 3/19/ 9/9/ 12/15 3/15/ 7/14/ 3/6// 6/6// 6/6// 9/12/	1/2002 5/2003 7/2003 7/2003 7/2003 7/2003 7/2004 7/2004 7/2004 7/2005 8/2005 8/2005 8/2005	5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	9,100 8,500 9,900 5,800 8,100 23,000 10,000 4,900 4,300 4,500 1,200 470 280 170 <50	3200 ° NA NA NA NA NA 1,800 ° 1,600 ° 1200 ° 290 ° 130 °	280 160 250 140 180 230 92 40 3iosparge Sy 16 11 1.3 1.2 <1.0 <1.0	120 210 450 220 330 380 140 38 stem Start-u 13 11 1.6 <1.0 <1.0	600 860 790 580 1,100 1,800 900 370 p After 7/9/0 150 37 25 22	840 1,780 2,020 1,350 2,700 5,290 2,200 880 94 Monitorin 281 167 66 32.3 7.9	64 33 <10 19 36 33 20 22 g Event <10 <10 1.4 <1.0	<10 <10 <10 <10 <10 <10 <10 <10 <10 <10	<10 <10 <10 <10 <10 <10 <10 <10 <10 <10	<10 <10 <10 <10 <10 <10 <10 <10 <10 <10	<250 <250 <250 <250 <25 <25 <250 <500 <25 <250 <250	NA
3/25/ 5/8%/ 6/27/ 10/1/ 12/12 3/26/ 7/9%/ 9/21/ 12/21 3/17/ 6/13/ 9/29/ 12/13 3/22/ 6/15/ MW-2 2/2 3/19/ 9/9// 12/15 3/15/ 7/14/ 3/66/ 6/66/ 9/12/	5/2003 /2003 /2003 /2003 //2003 //2003 //2004 //2004 //2004 //2004 //2005 //2005 //2005 //2006	5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	8,500 9,900 5,800 8,100 23,000 10,000 4,900 4,500 1,200 470 280 170 <50	NA NA NA NA NA NA 1,800 α 1,600 α 1,200 α 290 α 130 α 130 α	160 250 140 180 230 92 40 Biosparge Sy 16 11 1.3 1.2 <1.0 <1.0	210 450 220 330 380 140 38 sstem Start-u 13 11 1.6 <1.0 <1.0 <1.0	860 790 580 1,100 1,800 900 370 p After 7/9/0 150 37 25 22	1,780 2,020 1,350 2,700 5,290 2,200 880 04 Monitorin 281 167 66 32.3 7.9	33 <10 19 36 33 20 22 g Event <10 <10 1.4 <1.0	<10 <10 <10 <10 <10 <10 <20 <1.0 <10 <10 <10 <1.0 <1.0 <1.0 <1.0 <	<10 <10 <10 <10 <10 <10 <10 <10 <10 <10	<10 <10 <10 <10 <10 <10 <10 <1.0 <1.0 <1	<250 <250 <250 <25 <250 <500 <25 <250 <250	<10 <10 <10 <10 <10 <20 NA NA NA NA NA NA
5/8// 6/27/ 10/1/ 12/12 3/26/ 7/9// 10/1/ 12/12 3/17/ 6/13/ 9/29/ 12/13 3/17/ 6/15/ MW-2 2/2 3/19/ 9/9/ 12/15 3/15/ 3/15/ 7/14/ 3/6/6/ 6/6/6/	/2003 //2003 //2003 //2003 2/2003 2/2004 //2004 //2004 //2004 //2005 //2005 //2005 //2005 //2006	5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	9,900 5,800 8,100 23,000 10,000 4,900 4,300 4,500 1,200 470 280 170 <50	NA NA NA NA 1,800 α 1,600 α 1,200 α 1,200 α 290 α 130 α 50 50 50	250 140 180 230 92 40 Biosparge Sy 16 11 1.3 1.2 <1.0 <1.0	450 220 330 380 140 38 stem Start-u 13 11 1.6 <1.0 <1.0	790 580 1,100 1,800 900 370 p After 7/9/0 150 37 25 22	2,020 1,350 2,700 5,290 2,200 880 04 Monitorin 281 167 66 32.3 7.9	<10 19 36 33 20 22 g Event <10 <10 1.4 <1.0	<10 <10 <10 <10 <20 <1.0 <10 <10 <10 <10 <10 <10 <1.0 <1.0	<10 <10 <10 <10 <20 <1.0 <10 <10 <10 <10 <10 <10 <1.0 <1.0	<10 <10 <10 <10 <20 <1.0 <10 <10 <10 <10 <1.0 <1.0 <1.0 <1	<250 <25 <250 <500 <25 <250 <250 <250 <2	<10 <10 <10 <10 <20 NA NA NA NA NA NA
MW-2 2/2 3/15/ MW-2 2/2 3/15/ 3/15/ 6/15/ MW-12 3/15/ 6/15/ 6/15/ MW-2 3/19/ 9/9/ 12/11 3/15/ 6/15/ 6/15/ MW-2 3/19/ 9/9/ 12/15 3/15/ 6/15/ 9/12/ 12/15 3/15/ 9/15/ 9/15/ 9/15/ 9/15/ 9/12/15/ 9/15/ 9/15/ 9/15/ 9/15/ 9/15/	7/2003 1/2003 1/2003 1/2004 1/2004 1/2004 1/2004 1/2005 1/2005 1/2005 1/2005 1/2005 1/2005 1/2005 1/2006	5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	5,800 8,100 23,000 10,000 4,900 4,900 4,500 1,200 470 280 170 <50	NA NA NA 1,800 α 1,600 α 1,600 α 1,200 α 1	140 180 230 92 40 3iosparge Sy 16 11 1.3 1.2 <1.0 <1.0	220 330 380 140 38 stem Start-u 13 11 1.6 <1.0 <1.0 <1.0	580 1,100 1,800 900 370 p After 7/9/0 150 37 25 22 10	1,350 2,700 5,290 2,200 880 04 Monitorin 281 167 66 32.3 7.9	19 36 33 20 22 g Event <10 <10 1.4 <1.0	<10 <10 <20 <1.0 <10 <10 <10 <10 <10 <1.0 <1.0 <1.	<10 <10 <20 <1.0 <10 <10 <10 <10	<10 <10 <20 <1.0 <10 <10 <10 <10 <1.0 <1.0 <1.0 <1	<25 <250 <500 <500 <25 <250 <250 <250 <2	<10 <10 <20 NA NA NA NA NA NA
10/1/ 12/12 3/26/ 7/9/2 9/21/ 12/21 3/17/ 6/13/ 9/29/ 12/13 3/22/ 6/15/ MW-2 2/2 3/19/ 9/9/ 12/15 3/15/ 7/14/ 3/6// 6/6// 9/12/	7/2003 2/2003 2/2004 7/2004 1/2004 1/2004 1/2005 8/2005 8/2005 1/2005 1/2005 1/2005 1/2005 1/2006	5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	8,100 23,000 10,000 4,900 4,900 4,500 1,200 470 280 170 <50	NA NA 1,800 a 1,600 a 1,600 a 1,200 a 290 a 130 a <50 <50 <50	180 230 92 40 3iosparge Sy 16 11 1.3 1.2 <1.0 <1.0	330 380 140 38 stem Start-u 13 11 1.6 <1.0 <1.0 <1.0	1,100 1,800 900 370 p After 7/9/0 150 37 25 22 10	2,700 5,290 2,200 880 04 Monitorin 281 167 66 32.3 7.9	36 33 20 22 g Event <10 <10 1.4 <1.0	<10 <20 <1.0 <10 <10 <10 <10 <10 <1.0 <1.0 <1.	<10 <20 <1.0 <10 <10 <10 <10 <1.0 <10 <1.0 <1.	<10 <20 <1.0 <10 <10 <10 <10 <1.0 <1.0 <1.0 <1	<250 <500 <25 <250 <250 <250 <250 <25 <25	<10 <20 NA NA NA NA NA NA NA NA
12/12 3/26/2 7/9/2 9/21/1 3/17/6/13/ 9/29/ 12/13 3/2/2 6/15/ MW-2 2/2 3/19/ 9/9/ 12/15 3/15/ 7/14/ 3/6/6/ 6/6/6/	2/2003 /2004	5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	23,000 10,000 4,900 4,300 4,500 1,200 470 280 170 <50	NA 1,800 a 1,600 a 1,600 a 1,200 a 1,200 a 290 a 290 a 310 a <50 <50 <50	230 92 40 Biosparge Sy 16 11 1.3 1.2 <1.0 <1.0	380 140 38 stem Start-u 13 11 1.6 <1.0 <1.0 <1.0	1,800 900 370 p After 7/9/0 150 37 25 22 10	5,290 2,200 880 04 Monitorin 281 167 66 32.3 7.9	33 20 22 g Event <10 <10 1.4 <1.0	<10 <10 <10 <10 <10 <1.0 <1.0	<10 <10 <10 <10 <10 <1.0	<10 <10 <10 <10 <10 <10 <1.0 <1.0	<500 <25 <250 <250 <250 <250 <25 <25	<20 NA NA NA NA NA NA
MW-2 2/2 3/19/ MW-2 3/25/ 3/19/ 12/11 3/20/ 12/13 3/22/ 6/15/ 7/14/ 3/6// 6/6// 9/12/	/2004	5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	10,000 4,900 4,300 4,500 1,200 470 280 170 <50	1,800 ^d 1,600 ^d 1,600 ^d 420 ^a 1,200 ^u 290 ^u 130 ^a <50 <50 <50	92 40 Biosparge Sy 16 11 1.3 1.2 <1.0 <1.0	140 38 stem Start-u 13 11 1.6 <1.0 <1.0 <1.0	900 370 p After 7/9/0 150 37 25 22	2,200 880 04 Monitorin 281 167 66 32.3 7.9	20 22 g Event <10 <10 1.4 <1.0	<1.0 <10 <10 <10 <1.0 <1.0	<1.0 <10 <10 <10 <1.0	<1.0 <10 <10 <10 <1.0 <1.0	<25 <250 <250 <250 <25 <25 <25	NA NA NA NA NA
MW-2 2/2 3/15/ 5/15/ MW-2 3/15/ 3/15/ 6/15/ MW-12 3/19/ 12/15 3/15/ 7/14/ 3/6/ 6/6/ 9/12/	/2004 1/2004 1/2004 1/2005 8/2005 8/2005 3/2005 2/2006	5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	4,900 4,300 4,500 1,200 470 280 170 <50	1,600 ° 1 420 ° 1,200 ° 290 ° 130 ° <50 <50 <50	40 Biosparge Sy 16 11 1.3 1.2 <1.0 <1.0	38 stem Start-u 13 11 1.6 <1.0 <1.0 <1.0	370 p After 7/9/0 150 37 25 22	880 04 Monitorin 281 167 66 32.3 7.9	22 g Event <10 <10 1.4 <1.0	<10 <10 <10 <1.0 <1.0	<10 <10 <10 <1.0	<10 <10 <10 <1.0 <1.0	<250 <250 <250 <25 <25	NA NA NA NA
9/21/ 9/21/ 12/21 3/17/ 6/13/ 9/29/ 12/13 3/22/ 6/15/ MW-2 2/2 3/19/ 9/9/ 12/15 3/15/ 7/14/ 3/6// 6/6// 9/12/	1/2004 1/2004 1/2005 3/2005 0/2005 3/2005 2/2006	5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	4,300 4,500 1,200 470 280 170 <50	420 ^d 1,200 ^u 290 ^u 130 ^d <50 <50 <50	16 11 1.3 1.2 <1.0 <1.0	13 11 1.6 <1.0 <1.0 <1.0	p After 7/9/0 150 37 25 22 10	04 Monitorin 281 167 66 32.3 7.9	Sevent	<10 <10 <1.0 <1.0	<10 <10 <1.0	<10 <10 <1.0 <1.0	<250 <250 <25 <25 <25	NA NA NA NA
MW-2 2/2 3/17/ 6/13/ 9/29/ 12/13 3/22/ 6/15/ MW-2 3/19/ 12/15 3/15/ 7/14/ 3/6// 6/6// 9/12/	1/2004 7/2005 8/2005 9/2005 3/2005 2/2006	5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	4,500 1,200 470 280 170 <50	420 d 1,200 d 290 d 130 d <50 <50 <50	16 11 1.3 1.2 <1.0 <1.0	13 11 1.6 <1.0 <1.0 <1.0	150 37 25 22 10	281 167 66 32.3 7.9	<10 <10 1.4 <1.0	<10 <1.0 <1.0	<10 <1.0	<10 <1.0 <1.0	<250 <25 <25	NA NA NA
MW-2 2/2 3/17/ 6/13/ 9/29/ 12/13 3/22/ 6/15/ MW-2 3/19/ 12/15 3/15/ 7/14/ 3/6// 6/6// 9/12/	1/2004 7/2005 8/2005 9/2005 3/2005 2/2006	5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	4,500 1,200 470 280 170 <50	290 ° 130 ° <50 <50 <50	11 1.3 1.2 <1.0 <1.0	11 1.6 <1.0 <1.0 <1.0	37 25 22 10	167 66 32.3 7.9	<10 1.4 <1.0	<10 <1.0 <1.0	<10 <1.0	<10 <1.0 <1.0	<250 <25 <25	NA NA NA
6/13/ 9/29/ 12/13 3/22/ 6/15/ MW-2 2/2 3/19/ 9/9/ 12/15 3/15/ 7/14/ 3/66/ 9/12/	3/2005 0/2005 3/2005 2/2006	5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	470 280 170 <50	130 ° <50 <50 <50	1.2 <1.0 <1.0	<1.0 <1.0 <1.0	22 10	32.3 7.9	<1.0	<1.0		<1.0	<25	NA
9/29/ 12/13 3/22/ 6/15/ MW-2 2/2 3/19/ 9/9/ 12/15 3/15/ 7/14/ 3/67/ 6/6/6/ 9/12/	0/2005 3/2005 2/2006	5030/8015M/8260B 5030/8015M/8260B 5030/8015M/8260B	280 170 <50	<50 <50 <50	<1.0 <1.0	<1.0 <1.0	10	7.9			<1.0		<25	
MW-2 2/2 3/19/ 12/15 3/19/ 12/15 3/15/ 7/14/ 3/6// 6/6// 9/12/	3/2005 2/2006	5030/8015M/8260B 5030/8015M/8260B	170 <50	<50 <50	<1.0	<1.0			-1.0				-25	NA
3/22/ 6/15/ MW-2 2/2 3/19/ 9/9/ 12/15 3/15/ 7/14/ 3/6/ 9/12/	2/2006	5030/8015M/8260B	<50	< 50			4.4		<1.0	<1.0	<1.0	<1.0	<43	
6/15/ MW-2 2/2 3/19/ 9/9/ 12/15 3/15/ 7/14/ 3/6/6/ 9/12/					<1.0	<1.0		5.8	<1.0	<1.0	<1.0	<1.0	<25	NA
MW-2 2/2 3/19/ 9/9/ 12/15 3/15/ 7/14/ 3/6// 9/12/	5/2006	5030/8015M/8260B	98	<50			<1.0	<1.0	NA	NA	NA	NA	NA	NA
3/19/ 9/9/ 12/15 3/15/ 7/14/ 3/6/ 6/6/2				< 30	<1.0	<1.0	2.5	1.7	<1.0	<1.0	<1.0	<1.0	<12	NA
3/19/ 9/9/ 12/15 3/15/ 7/14/ 3/6/ 6/6/2	9									1				
9/9/ 12/15 3/15/ 7/14/ 3/6/ 6/6/ 9/12/		8015M / 8020	<50.0	110 ^e	< 0.5	1.2	< 0.5	< 0.5	NA	ND	ND	ND	ND	NA
12/15 3/15/ 7/14/ 3/6// 6/6// 9/12/		5030/602/8260	<50.0	<50	< 0.3	< 0.3	< 0.5	< 0.5	NA	ND	ND	ND	ND	NA
3/15/ 7/14/ 3/6/2 6/6/2 9/12/		5030A/8260B/8015M	<50.0	<50	< 0.3	< 0.3	<0.5	<0.5	ND	ND	ND	ND	ND	NA
7/14/ 3/6/2 6/6/2 9/12/		5030A/8260B/8015M	<50	<50	< 0.30	< 0.30	< 0.50	< 0.50	< 0.50	ND	ND	ND	ND	NA 0.5
3/6/2 6/6/2 9/12/		5030A/8260B/8015M	<50 <50	<50 <50	<0.30 <0.30	<0.30 <0.30	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	ND ND	ND ND	ND ND	ND ND	<0.5 <0.5
6/6/2 9/12/		5030A/8260B/8015M 5030A/8260B/8015M	<50	<50	<0.30	<0.30	<0.50	<0.50	<0.50	ND ND	ND ND	ND ND	ND ND	<0.50
9/12/		5030A/8260B/8015M	<50	<50	<0.30	<0.30	< 0.50	< 0.50	< 0.50	ND ND	ND	ND ND	ND	< 0.50
		5030A/8260B/8015M	<50	<50	< 0.30	<0.30	< 0.50	<0.50	< 0.50	ND	ND	ND ND	ND	< 0.50
		3030A/8200B/8013M	<u> </u>	<50	<0.50	<0.50	Not Sam		<0.50	ND	ND	ND	ND	<0.50
	1/2002	5030A/8260B/8015M	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	1/2002	3030A/8200B/8013M	<u> </u>	<u> </u>	₹1.0	₹1.0	Not Sam		<1.0	<1.0	<1.0	₹1.0	\23	\1.0
	0/2002						Not San							
	5/2003	5030/8015M/8260B	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	7/2003	5030/8015M/8260B	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	/2003	5030/8015M/8260B	<50	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	2/2003	5030/8015M/8260B	<50	NA	<1.0	2.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	/2004 1	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	/2004	5030/8015M/8260B	< 50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
		<u> </u>	•					04 Monitorin						
9/21/	/2004	5030/8015M/8260B	< 50	< 50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
12/21	1/2004	5030/8015M/8260B	< 50	< 50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
3/17/	7/2005	5030/8015M/8260B	< 50	< 50	<1.0	<1.0	2.1	4.1	<1.0	<1.0	<1.0	<1.0	<25	NA
	3/2005	5030/8015M/8260B	<50	< 50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
9/29/	9/2005	5030/8015M/8260B	<50	< 50	<1.0	<1.0	<1.0	1.2	<1.0	<1.0	<1.0	<1.0	<25	NA
12/13	3/2005	5030/8015M/8260B	< 50	< 50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
3/22/	2/2006	5030/8015M/8260B	< 50	< 50	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA
6/15/		5030/8015M/8260B	< 50	< 50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<12	NA
	5/2006	J0J0/001JW/0200D	130											
Water Q	5/2006		<50	<50		<42	<29	<17					<12	< 0.5

Table 5. Analytical Results of Groundwater Samples

Mani Site

Well ID	Date Sampled	Analytic Methods	TPH-G	TPH-D	В	T	E	X	МТВЕ	DIPE	ETBE	TAME	TBA	EDC EDB
ш	Sampleu			•		•		uş	g/L	•	•			
MW-3	2/2/95 a	8015M / 8020	< 50.0	460	5.4	12	1.3	12.0	NA	NA	NA	NA	NA	NA
	3/19/1995	5030/602/8260	<50.0	<50	< 0.3	< 0.3	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA
	9/9/1999	5030A/8260B/8015M	< 50.0	< 50	< 0.3	< 0.3	< 0.5	< 0.5	ND	ND	ND	ND	ND	NA
	12/15/1999	5030A/8260B/8015M	< 50	< 50	< 0.30	< 0.30	< 0.50	< 0.50	< 0.50	ND	ND	ND	ND	NA
	3/15/2000	5030A/8260B/8015M	< 50	< 50	< 0.30	< 0.30	< 0.50	< 0.50	< 0.50	ND	ND	ND	ND	< 0.5
	7/14/2000	5030A/8260B/8015M	< 50	< 50	< 0.30	< 0.30	< 0.50	< 0.50	< 0.50	ND	ND	ND	ND	< 0.5
	3/6/2001	5030A/8260B/8015M	< 50	< 50	< 0.30	< 0.30	< 0.50	< 0.50	< 0.50	ND	ND	ND	ND	< 0.5
	6/6/2001	5030A/8260B/8015M	< 50	< 50	< 0.30	< 0.30	< 0.50	< 0.50	< 0.50	ND	ND	ND	ND	< 0.5
	9/12/2001	5030A/8260B/8015M	< 50	< 50	< 0.30	< 0.30	< 0.50	< 0.50	< 0.50	ND	ND	ND	ND	< 0.5
	12/13/2001						Not Sam	pled						
	1/24/2002						Well Dest	royed						
MW-4	3/21/2002	5030A/8260B/8015M	420	120 °	4.1	<1.0	5.4	<1.0	43	<1.0	<1.0	<1.0	<25	<1.0
	6/14/2002	5030A/8260B/8015M	550	110 ^u	<1.0	<1.0	3.4	<1.0	33	<1.0	<1.0	<1.0	<25	NA
	9/10/2002	5030A/8260B/8015M	1,300	200 ^u	6.6	<1.0	38	<1.0	27	<1.0	<1.0	<1.0	<25	NA
	12/11/2002	5030/8015M/8260B	510	230 °	2.1	<1.0	13	<1.0	28	<1.0	<1.0	<1.0	<25	NA
	3/25/2003	5030/8015M/8260B	410	NA	<1.0	<1.0	1.7	<1.0	24	<1.0	<1.0	<1.0	<25	<1.0
	6/27/2003	5030/8015M/8260B	410	NA	<1.0	<1.0	1.5	<1.0	9.8	<1.0	<1.0	<1.0	<25	<1.0
	10/1/2003	5030/8015M/8260B	350	NA	<1.0	<1.0	<1.0	<1.0	9.5	<1.0	<1.0	<1.0	<25	<1.0
	12/12/2003	5030/8015M/8260B	490	NA	<1.0	<1.0	<1.0	<1.0	11	<1.0	<1.0	<1.0	<25	<1.0
	3/26/2004 1	5030/8015M/8260B	290	<50	<1.0	<1.0	<1.0	<1.0	9.0	<1.0	<1.0	<1.0	<25	NA
	7/9/2004	5030/8015M/8260B	870	120 ^a	3.5	<1.0	2.3	10.3	6.4	<1.0	<1.0	<1.0	<25	NA
					Biosparge Sy									
	9/21/2004	5030/8015M/8260B	650	91 ^a	<1.0	<1.0	<1.0	<1.0	1.3	<1.0	<1.0	<1.0	<25	NA
	12/21/2004	5030/8015M/8260B	600	75 °	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	3/17/2005	5030/8015M/8260B	130	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	6/13/2005	5030/8015M/8260B	180	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	9/29/2005	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	12/13/2005	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	3/22/2006	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	NA 1.0	NA	NA 1.0	NA	NA 12	NA
	6/15/2006	5030/8015M/8260B	<50	< 50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<12	NA
MW-5	3/21/2002	5030A/8260B/8015M	400	<50	<1.0	<1.0	<1.0	<1.0	32	<1.0	<1.0	<1.0	<25	<1.0
IVI VV -3	6/14/2002	5030A/8260B/8015M	<50	<50	<1.0	<1.0	<1.0	<1.0	31	<1.0	<1.0	<1.0	<25	NA NA
	9/10/2002	5030A/8260B/8015M	350	<50	<1.0	<1.0	<1.0	<1.0	11	<1.0	<1.0	<1.0	<25	NA NA
	12/11/2002	5030/8015M/8260B	390	<50	<1.0	<1.0	<1.0	<1.0	21	<1.0	<1.0	<1.0	<25	NA
	3/25/2003	5030/8015M/8260B	380	NA	<1.0	<1.0	<1.0	<1.0	21	<1.0	<1.0	<1.0	<25	<1.0
	6/27/2003	5030/8015M/8260B	290	NA	<1.0	<1.0	<1.0	<1.0	11	<1.0	<1.0	<1.0	<25	<1.0
	10/1/2003	5030/8015M/8260B	260	NA NA	<1.0	<1.0	<1.0	<1.0	5.9	<1.0	<1.0	<1.0	<25	<1.0
	12/12/2003	5030/8015M/8260B	210	NA	<1.0	<1.0	<1.0	<1.0	6.5	<1.0	<1.0	<1.0	<25	<1.0
	3/26/2004 ^T	5030/8015M/8260B	270	<50	<1.0	<1.0	<1.0	<1.0	9.9	<1.0	<1.0	<1.0	<25	NA.
	7/9/2004	5030/8015M/8260B	280	<50	<1.0	<1.0	<1.0	<1.0	7.1	<1.0	<1.0	<1.0	<25	NA
					Biosparge Sy									
	9/21/2004	5030/8015M/8260B	230	<50	<1.0	<1.0	<1.0	<1.0	3.7	<1.0	<1.0	<1.0	<25	NA
	12/21/2004	5030/8015M/8260B	210	<50	<1.0	<1.0	<1.0	<1.0	3.4	<1.0	<1.0	<1.0	<25	NA
	3/17/2005	5030/8015M/8260B	200	<50	<1.0	<1.0	<1.0	<1.0	4.4	<1.0	<1.0	<1.0	<25	NA
	6/13/2005	5030/8015M/8260B	160	<50	<1.0	<1.0	<1.0	<1.0	2.0	<1.0	<1.0	<1.0	<25	NA
	9/29/2005	5030/8015M/8260B	200	<50	<1.0	<1.0	<1.0	1.5	1.4	<1.0	<1.0	<1.0	<25	NA.
	12/13/2005	5030/8015M/8260B	240	<50	<1.0	<1.0	<1.0	<1.0	1.3	<1.0	<1.0	<1.0	<25	NA.
	3/22/2006	5030/8015M/8260B	190	<50	<1.0	<1.0	<1.0	<1.0	2.0	NA	NA	NA	NA	NA
	6/15/2006	5030/8015M/8260B	120	<50	<1.0	<1.0	<1.0	<1.0	2.2	<1.0	<1.0	<1.0	<12	NA
								1					1	
		bjectives in ug/L	< 50	< 50	<1	<42	<29	<17	<5	None	None	None	<12	<0.

Table 5. Analytical Results of Groundwater Samples

Mani Site

200 Talmadge Drive, Santa Rosa, California

Well ID	Date Sampled	Analytic Methods	трн-G	TPH-D	В	Т	E	X	МТВЕ	DIPE	ETBE	TAME	TBA	EDC / EDB
ID	Sampled			1	1	ı	1	ug	/L		1	1		
MW-6	3/21/2002	5030A/8260B/8015M	< 50	< 50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	6/14/2002	5030A/8260B/8015M	< 50	< 50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	9/10/2002	5030A/8260B/8015M	< 50	< 50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	12/11/2002	5030/8015M/8260B	< 50	< 50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	3/25/2003	5030/8015M/8260B	< 50	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	6/27/2003	5030/8015M/8260B	< 50	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	10/1/2003	5030/8015M/8260B	< 50	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	12/12/2003	5030/8015M/8260B	260	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	3/26/2004 ^r	5030/8015M/8260B	< 50	< 50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	7/9/2004	5030/8015M/8260B	< 50	< 50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
					Biosparge Sy	stem Start-u	p After 7/9/0	4 Monitorin						
	9/21/2004	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	12/21/2004	5030/8015M/8260B	< 50	< 50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	3/17/2005	5030/8015M/8260B	< 50	< 50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	6/13/2005	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	9/29/2005	5030/8015M/8260B	<50	< 50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	12/13/2005	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	NA
	3/22/2006	5030/8015M/8260B	<50	<50	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA
	6/15/2006	5030/8015M/8260B	< 50	< 50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<12	NA
SP-1	6/1/2004	EDA 5020/0015M/02/0D	<50	NA	<1.0 g	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
SP-2	6/1/2004	EPA 5030/8015M/8260B EPA 5030/8015M/8260B	<50	NA NA	<1.0 ^g	<1.0	<1.0	<1.0	5.7	<1.0	<1.0	<1.0	<25	<1.0
SP-3	6/1/2004	EPA 5030/8015M/8260B	4,100	NA NA	<5.0	<5.0	11	240	<5.0	<5.0	<5.0	<5.0	<100	<5.0
SP-4	6/1/2004	EPA 5030/8015M/8260B	3,600	NA NA	15	<5.0	81	127	10	<1.0	<1.0	<1.0	<25	<5.0
SP-5	6/1/2004	EPA 5030/8015M/8260B	<50	NA NA	<1.0	<1.0	<1.0	<1.0	5.1	<1.0	<1.0	<1.0	<25	<1.0
31-3	0/1/2004	EFA 3030/8013M/8200B	\J0	INA	<1.0	<1.0	<1.0	<1.0	3.1	<1.0	<1.0	<1.0	<u>\</u> 23	<1.0
Trip Blank	3/19/1998	5030 / 602	<50	NA	< 0.3	< 0.3	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA
	9/9/1999	5030A / 8020	<50	NA	< 0.3	< 0.3	< 0.5	<0.5	NA	NA	NA	NA	NA	NA
	12/15/1999	8260B	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/15/2000	5030A / 8020	<50	NA	< 0.3	< 0.3	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA
	7/14/2000	5030A / 8020	< 50	NA	< 0.3	< 0.3	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA
	3/6/2001	5030A / 8020	< 50	NA	< 0.30	< 0.30	< 0.50	< 0.50	NA	NA	NA	NA	NA	NA
	6/6/2001	5030A / 8020	< 50	NA	< 0.30	< 0.30	< 0.50	< 0.50	NA	NA	NA	NA	NA	NA
	9/12/2001	5030A / 8020	< 50	NA	< 0.30	< 0.30	< 0.50	< 0.50	NA	NA	NA	NA	NA	NA
	12/13/2001	5030A / 8020	< 50	NA	< 0.30	< 0.30	< 0.50	< 0.50	NA	NA	NA	NA	NA	NA
	3/21/2002	8260	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<25	<1.0
	6/14/2002	8015M/8020	<50	NA	< 0.5	< 0.5	< 0.5	<1.5	NA	NA	NA	NA	NA	NA
	9/9/2002	8015M/8020	< 50	NA	< 0.5	< 0.5	< 0.5	<1.5	NA	NA	NA	NA	NA	NA
	12/11/2002	5030/8015M/8020	< 50	NA	< 0.5	< 0.5	< 0.5	<1.5	<2.5	NA	NA	NA	NA	NA
	3/25/2003	5030/8015M/8020	< 50	NA	< 0.5	< 0.5	< 0.5	<1.5	NA	NA	NA	NA	NA	NA
	6/27/2003	5030/8015M/8020	< 50	NA	< 0.5	< 0.5	< 0.5	<1.5	NA	NA	NA	NA	NA	NA
	10/1/2003	5030/8015M/8020	< 50	NA	< 0.5	< 0.5	< 0.5	<1.5	NA	NA	NA	NA	NA	NA
	12/12/2003	5030/8015M/8020	< 50	NA	< 0.5	< 0.5	< 0.5	<1.5	NA	NA	NA	NA	NA	NA
	3/26/2004	5030/8015M/8260B	< 50	NA	< 0.5	< 0.5	< 0.5	<1.5	NA	NA	NA	NA	NA	NA
**	7-4 O	Obi	.50	.50	1 4	.42	-20	1 47		N	N	I N	-11	-0.5
W	ater Quality (Objectives in ug/L	< 50	< 50	<1	<42	<29	<17	<5	None	None	None	<12	< 0.5

Notes: a = Sampled by Sierra Environment Services

- b = Laboratory reports the positive result appears to be both a heavier and lighter hydrocarbon than diesel.
- c = The Laboratory reports that results in the diesel range are primarily due to overlap from a gasoline range product.
- d = The sample does not exhibit a chromatographic pattern characteristic of diesel. Higher boiling point components of weathered gasoline are present.
- e = The laboratory reports the positive result appears to be a heavier hydrocarbon than diesel.
- f = 3/26/04 samples were analyzed for TPH-MO by 8015M. Results were ND<200 ug/L.
- g = Tetrahydrofuran (THF) was detected and is the primary ingredient in PVC pipe glue and consequently may not be a persistent contaminant.

 $\frac{\textbf{Abbreviations:}}{\text{TPH-G} = \text{Total petroleum hydrocarbons as gasoline}}$

TPH-D = Total petroleum hydrocarbons as diesel

B = Benzene

T = Toluene

E = Ethyl benzene

X = Total xylenes

EDC = 1,2-dichloroethane EDB = 1,2-dibromoethane

NA = Not analyzed

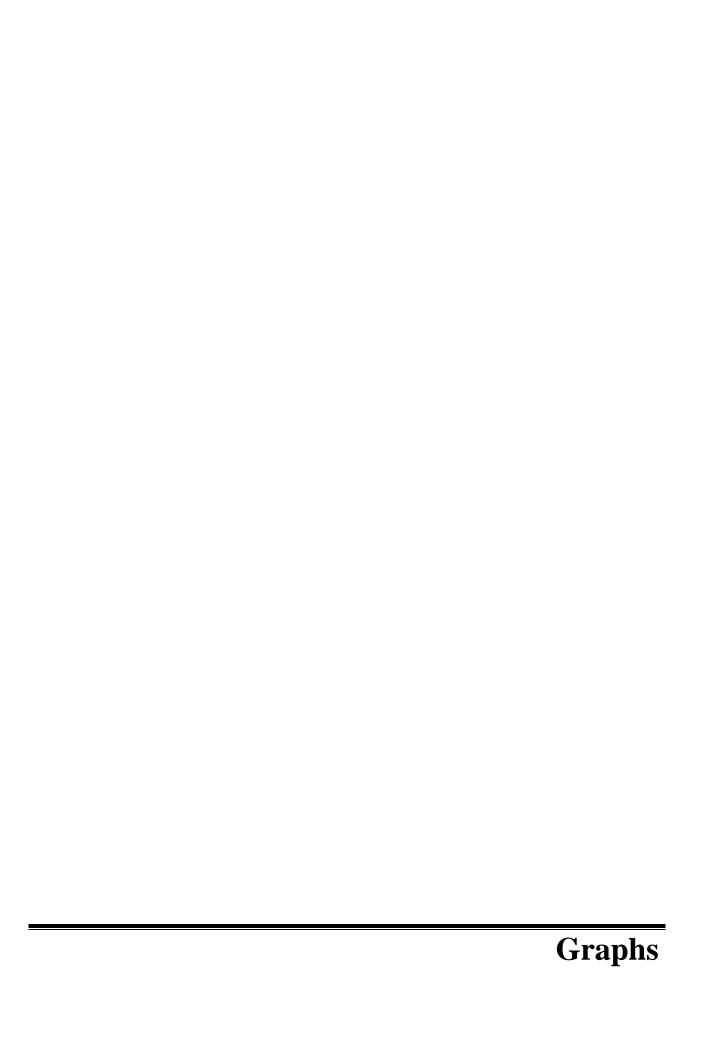
ND = Not detected above laboratory detection limits

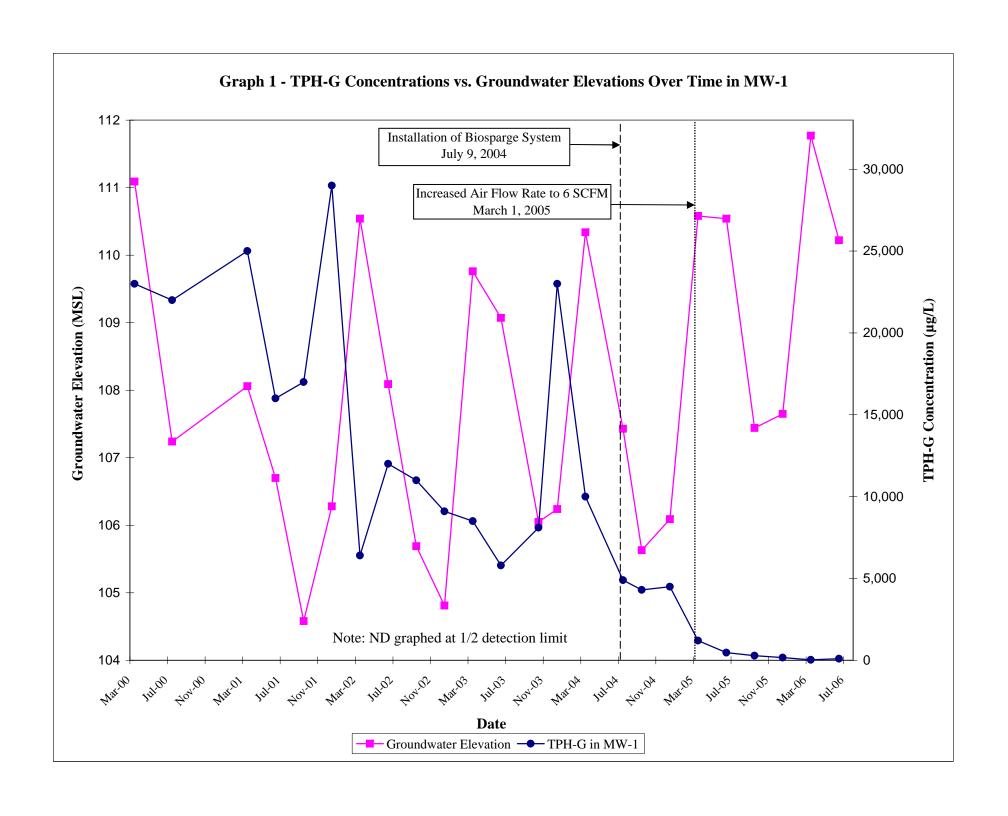
The 5 Oxygenates Include:

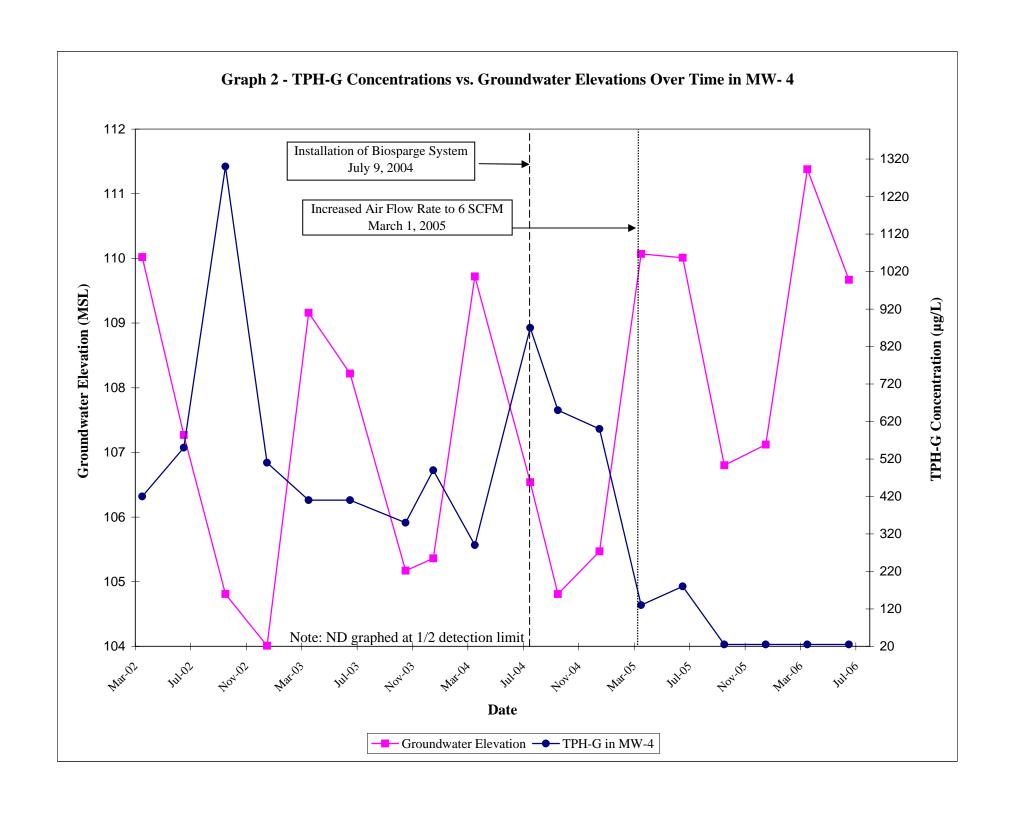
MTBE = Methyl tert-butyl ether Analytic Methods: 5030 = EPA Method GCFID/5030 for TPH-G

DIPE = Di-isopropyl ether 602 = EPA Method 602 for BTEX ETBE = Ethyl tert-butyl ether 8020 = EPA Method for MTBE

TAME = Tert-amyl methyl ether 8260B = EPA Method 8260 for BTEX / Oxygenates TBA = Tert-butyl alcohol 8015M = EPA method 8015M for Diesel









WINZLER & KELLY CONSULTING ENGINEERS

Site-Specific Groundwater Sampling Procedures Mani Site 200 Talmadge Drive Santa Rosa, California June 13 and 15, 2006

1. Objective

Collect representative water level data and groundwater samples.

2. Background

Based on the analytical results of the previous sampling, field work proceeded from the monitoring wells in which the samples collected had the lowest concentrations of constituents to the wells that had the highest concentrations of constituents.

Water levels were collected to determine the direction and gradient of groundwater flow. Representative groundwater samples from the water-bearing zone were obtained using disposable polyethylene bailers following purging.

3. Personnel Required and Responsibilities

<u>Winzler & Kelly Technicians</u>: Pon Xayasaeng and Lenny Laskowsky performed groundwater monitoring and sampling activities in accordance with the procedures outlined below.

4. Procedures

4a. Biosparge System Shutdown and DO Concentrations, June 13, 2006

- The membrane on the YSI Model 55 DO meter was checked for the presence of bubbles and wrinkles, neither of which was observed.
- The meter was calibrated in the field prior to collecting measurements.
- Using the calibrated YSI Model 55 DO Meter, DO concentrations were measured in each monitoring well while the biosparge system was operating.
- Following DO measurements, the biosparge system was shutdown to allow the groundwater to equilibrate to atmospheric pressure.

4b. Decontamination Procedures, June 15, 2006

- Using Alconox soap and potable water, each equipment and instrument were decontaminated upon arriving at the site.
- Each equipment and instrument was decontaminated after use in each well.
- Each equipment and instrument was decontaminated after field activities had been completed.

• Nitrile gloves were worn by sampler at all times and changed after handling equipment and instruments.

4c. Calibration Procedures, June 15, 2006

- The Ultrameter was calibrated for conductivity and pH. Temperature calibration is not necessary in the Ultrameter.
- Conductivity was calibrated using KCl-7000 standard solution within its expiration date.
- The calibration for pH included "zeroing" the Ultrameter with a pH 7 buffer solution followed by adjusting the gain with acid and base buffers (4.00 and 10.00). All buffer solutions were within their expiration date.

4c. Groundwater Elevations, March 21 and 22, 2006

- On June 13, 2006, monitoring wells were opened; expandable caps removed, and allowed to equilibrate for at least 20 minutes.
- A water level meter was used to measure the depth-to-groundwater in each monitoring well while the biosparge system was on.
- On June 15, 2006, monitoring wells were opened; expandable caps removed, and allowed to equilibrate for at least 20 minutes.
- A water level meter was used to measure the depth-to-groundwater in each monitoring well with the biosparge system turned off.
- Recorded depth, time, and visual observations regarding well access, condition, security, etc. on water level data sheet.

4d. Purging, June 15, 2006

- The volume of standing water in each monitoring well was calculated using the diameter of the well, the measured depth-to-water, and the depth-to-bottom. The volume was recorded on the Well Sampling Data Sheet for each well.
- Monitoring wells were purged using a 12-volt DC 1.5-inch electric submersible pump.
- Field parameters (pH, conductivity, and temperature) were obtained with the Ultrameter and visual observations of color/odor/turbidity at each well casing interval throughout the purging process.
- The time, readings, and visual comments were recorded on the Well Sampling Data Sheet.
- Each well was purged until field parameters stabilized, not exceeding 7 casing volumes, or until the well de-watered.
- The electric submersible pump was decontaminated after each use.
- All excess water was transferred to 55-gallon drums labeled and secured on site.

4e. Groundwater Sample Collection, June 15, 2006

- Groundwater samples were collected by lowering previously unused, disposable, polyethylene, bottom-filling bailers into the well once the water level had recharged to at least 80%.
- When completely full, the bailer was carefully retracted from the well and the

groundwater was transferred from the bailers to the appropriate certified clean sampling containers.

- Groundwater transferred into 40-ml glass vials were preserved with HCl.
- Upon filling, each vial was immediately capped. The vial was checked for air bubbles by inverting and gently tapping the vial.
- All sample containers were labeled with the following information:

Sample ID Date and Time Sample Collected

Location Sampler's Initials

- Sample information was documented on a chain-of-custody form.
- All sample containers were placed in an ice chest chilled with ice.
- Upon completion of the sampling activities, each well was closed and secured by replacing the well cap and securing the lock.

5. Equipment Used:

- Disposable gloves
- Potable water
- Alconox soap
- Containers to hold rinsate water
- Scrub brushes
- Tools to open wells
- Keys to wells
- Water Level Data Form/pencil
- Well Sampling Data Sheet
- Groundwater Sampling Log form
- Water level meter
- 12-volt DC 1.5-inch electric submersible pump
- UltraMeter
- YSI Model 55 DO meter
- Containers to hold extracted water (as required)
- Disposable bailers (previously unused)
- Monofilament nylon line (50 lb test)
- Scissors
- Laboratory supplied sample containers (preserved, as required)
- Sample labels
- Ice chest with ice
- Labels/indelible marker
- Trash bags
- 55-gallon drums
- Ziploc bags
- Portable 12-V battery



***	.W	\mathbf{T}	J2	ZI	_F	Ξ]	₹.	S	Z.	Ŀ	<	F	ı	J	_	ľ
₩ ₩				, 4		w	c	-	13	C				E7	D	•

PROJECT NAME: Mani

WATER LEVEL MEASUREMENT DATA SHEET CANADAY'S DATE: 6/15/06

PROJECT NUMBER: 0234305001.37007

FIELD PERSONNEL: Lenny / Pon

WELL	OPEN WELL	INITIAL WA	TER LEVEL 6/12/06	FII Sust:	VAL WA	ER LEVEL 6/14/06 Depth to	D.O. (mg/4)
NUMBER	Time	System Oy Time	Depth to Water (ft. bgs)	open	ne	Depth to Water (ft. bgs)	D.O. (mg/4) -comments System on 6/13/e
MW-2	12:33	12:53	9.77	613/06	8:46	9.68	3.50
MW-6	12:39	12:58	7.93	1	8:49	7.85	9.24
MW-4	12:37	1:00	8.38		8:51	8.25	3.85
MW-1	12:43	1:02	8.64		8:54	8.47	12.65
MW-5	12:45	1:04	4.80	V	9:01	8.73	2.10
		,			<u> </u>		200
-		AND THE PROPERTY AND TH					
	100 TO TO TO TO TO TO TO TO TO TO TO TO TO	TOTAL PROPERTY.					
							,
4		VANDA DE SERVICIO			-		
			Transmiss of transmiss high and a high distribution of the contract of the con				
					:		-

_							
			~				
Weather Cond	itions Today	<u> </u>	\		1	01 1	TE -1 1122
vveaulei Colla	nions roudy.	Need 1	orum,	<u> </u>	Tem	DOUTE	Ff at 1:00



WELL SAMPLING DATA SHEET CISCO C PROJECT DATE: 6/14/06

PROJECT NUMBER: 0234305001.32002

SAMPLER: Lenny Laskowsky

WELL DESIGNATION: MW-

PROJECT NAME: Mani Site

SAMPLE NUMBER: MW- \

	F WELL HEAD / VA CASING ELEVATIO	ULT / CAP & LOCK					
							
B. DEPTH T	O GROUNDWATE	R (Initial): MEAS	upen. 🛠 L	17			
			URED:				
		MN (C-B):					
E. GROUND	WATER ELEVATION	ON (A-B):		•			
	-	Χ			4"		₹
Volum	e (V) of 2" well – 0. e (V) of 4" well – 0.	653 gal/ft	_				
odor 1	2	SHEEN No	FLOATIN	NG PRODUC	T THICKNESS <u>L/C</u>	<u> </u>	
PUMP TYPE :		POLY BAILER		STAINLE	ESS BAILER		
		ELECTRIC X		OTHER			
PUMP DEPTH:	GALLONS	NO. OF WELL	T		CONDUCTIVITY	ORP	TURBIDITY
TIME	PURGED	VOLUMES	pH	TEMP	(µMHOS/CM)	(mV)	(NTU)
	2.7	1	72/1	19.3	767.8	192	Slight Silt
	5.4	2	7.1	18.4	718.8	166	Cles
	8.	3	7.07	18.2	70×·5	150	Ced
							·
			3.	<u> </u>			
				·			
			<u> </u>				

RECHARGE R SAMPLER TY	ATE (qualitative): PE: TEFL0	ON BAILER	ACRYLI	C BAILER	DISP	OSABLE BAILE	rX
SAMPLES CO	LLECTED:	PRESER	VED VOA'S _	•	UNPRESE	ERVED VOA'S	
					UNPRESE		
					RSERVATIVE FOR M		
	•	FILTERE	D:		UNFILTER	RED:	
		OTHER:					
COMMENTS:							

***	. 'V	X/	1	1	1:	Z	I_	Į.	=	R	8	×	Ĕ	<	E	Ξ	_1		Y
44	С	0	N	5	U	L	٢	1	ĸ	G	ŧ	N	G	ı	N	E	E	R	s

WELL SAMPLING DATA SHEET (15/06
PROJECT DATE: 6/14/06

PROJECT NUMBER: 0234305001.32002

SAMPLER: Lenny Laskowsky

WELL DESIGNATION: MW-

PROJECT NAME: Mani Site

SAMPLE NUMBER: MW-

CONDITION OF	WELL HEAD / VA	ULT / CAP & LOCK					
A. TOP OF	CASING ELEVATION	ON:		4			
B. DEPTH T	O GROUNDWAȚE	R (initial):	4				
C. DEPTH C	of WELL: 25	MEASU	JRED: <u>9.6</u>	δ			
D. HEIGHT	OF WATER COLU	MN (C-B):					
E. GROUND	WATER ELEVATION	ON (A-B):			-		
CASTING DIAM	ETER: 2"	<u>X</u>	3"		4"	OTHER	·
	e(V) of 4" well – 0.	653 gal/ft					
odor N	<u>Y</u>	SHEEN NO	FLOATING	PRODUC'	T THICKNESS 1	<u>δ</u>	
PUMP TYPE :		POLY BAILER		STAINLE	SS BAILER		
		ELECTRIC X		OTHER			
)				
PUMP DEPTH:	GALLONS	NO&OF WELL	<u> </u>		CONDUCTIVITY	ORP	TURBIDITY
TIME	PURGED	VOLUMES	pΗ	TEMP	(µMHOS/CM)	(mV)	(NTU)
	2,5	1	6.49	q y	765,0	277	Clear
-	5.0	2多	6.58	18.5	500.	212	Class
	7.5	3	6.59	1804	499.7	205	100
	7						
			1				
			-				
					·		
	_				·		
		-					
RECHARGE RASAMPLER TYP	! ATE (qualitative): E: TEFL(ON BAILER	ACRYLIC I	BAILER	DISP	OSABLE BAILER	₹_X
		•		_			
SAMPLES COL	LECTED:	, parcen	(ED VOA'S			ERVED VOA'S	
SAMELES COL	ELOTED.		/ED VOA'S			ERVED VOAG	
			/ED LITERS		RSERVATIVE FOR N	-	
•	•		. А <u>зтіс воотіс</u> D:			RED:	
		OTHER:			-		
COMMENTS:							

***	·W	П	r	1	Z	L	ŀ	Ξ.	R	8	z	Ŀ	<	E	EI	_]		Y
A.A.	€ 0	N	5	¥	L	Ŧ	1	н	G	£	N	G	ι	н	Ε	Ε	R	s

WELL SAMPLING DATA SHEET 4/15/06
PROJECT DATE: 6/14/66

PROJECT NAME: Mani Site PROJECT NUMBER: 0234305001.32002

SAMPLER: Lenny Laskowsky

WELL DESIGNATION: MW-

SAMPLE NUMBER: MW-

			•			•	
	- WELL HEAD / VA CASING ELEVATIO	ULT / CAP & LOCK					
		R (initial):					
B. DEPTH T	DE WELL AN	MEAS	HRED,				
							
		MN (C-B):	,				•
E. GROUND	WATER ELEVATION	N (A-B):					
CASTING DIAN	METER: 2"	Χ	3"	,	4"	OTHER	<u> </u>
CALCULATED	WELL VOLUME: D	xv=_(20	825)(.1	63)	= 1.92		41911-1-1
Volum	ne (V) of 2" well – 0. ne (V) of 4" well – 0.	163 gal/ft	,				
ODOR 1	0	SHEEN <u>NÖ</u>	FLOATIN	G PRODUC	T THICKNESS <u>//</u>	0_	
PUMP_TYPE:		POLY BAILER		STAINLE	ESS BAILER		
		ELECTRIC X		OTHER			
PUMP DEPTH	: GALLONS	NO. OF WELL			CONDUCTIVITY	ORP	TURBIDITY
TIME	PURGED	VOLUMES	pH	TEMP	(µMHOS/CM)	(mV)	(NTU)
	1.97	<u> </u>	6.57	19.8	565,7	11/3	Clock
	3.84	2	64	19.	0 565:4	177	Clear
	5.76		6-91	1.7d	5911	1.08	lea
. # A7				-			
<u> </u>							
						-	
						1	
RECHARGE F SAMPLER TY	RATE (qualitative): PE: TEFL	ON BAILER	ACRYLIC	C BAILER	DIS	POSABLE BAILE	R_X
						٠	:
SAMPLES CO	LLECTED:	PRESEF	RVED VOA'S _		UNPRES	SERVED VOA'S	
		PRESEF	RVED LITERS _		UNPRES	SERVED LITERS	
					RSERVATIVE FOR		
		and the second s	ED:		•	INCU	
•		OTHER:			_		
COMMENTS:					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		

WELL SAMPLING DATA SHEET PROJECT DATE: 6/14/06

PROJECT NUMBER: <u>0234305001.32002</u>

SAMPLER: Lenny Laskowsky

WELL DESIGNATION: MW-5

PROJECT NAME: Mani Site

SAMPLE NUMBER: MW- 5

		AULT / CAP & LOCK					
	CASING ELEVATI	ER (initial):					
B. DEPTH T	O GROUNDWATE	MEASI	IDED:	73			
	=		UNED	• /	_		
		IMN (C-B):					
E. GROUND	WATER ELEVATION	ON (A-B):		•			
			3"	•	4"	OTHER	
Volume	e (V) of 2" well – 0. e (V) of 4" well – 0.	653 gal/ft					
odor 📝	2	SHEEN NO	FLOATIN	NG PRODUCT	THICKNESS 10	<u>></u>	
PUMP TYPE :		POLY BAILER		STAINLE	SS BAILER	- 	
	-	ELECTRIC X					
PUMP DEPTH:	GALLONS	NO. OF WELL	- nu	TEMP	CONDUCTIVITY	ORP	TURBIDITY
TIME	PURGED	VOLUMES	pH		(µMHOS/CM)	(mV)	(NTU)
	1.84		7.15	2007	555.0	101	Clear
	3.68	<u>X</u>	6.95	18/3	512, 7	26	Class
	5.52		6.00	1200	507.1		
							·
					•		
		•				-	
					and all the second seco	-	
RECHARGE RASAMPLER TYPE	ATE (qualitative): PE: TEFL	ON BAILER	ACRYLI	C BAILER	DISP	OSABLE BAILE	к <u>Х</u>
SAMPLES COL	LECTED:	PRESER'	VED VOA'S _		UNPRESI	ERVED VOA'S _	
		PRESER	VED LITERS _		UNPRESI	ERVED LITERS	
					RSERVATIVE FOR M		
			D:			KEU:	
		OTHER:					
COMMENTS:				•			

****	\dot{z}	X/	7	_	1.	Z	L	ŀ	Ξ.	R	8	Ż	E	<	E	Ξ	ار		Y	
444	c	ò	N	s	U	Ł	7	ī	H	G	ε	H	G	1	н	ε	E	R	s	

WELL SAMPLING DATA SHEET 6/15/06
PROJECT DATE: 6/14/06

PROJECT NUMBER: 0234305001.32002

SAMPLER: Lenny Laskowsky

WELL DESIGNATION: MW- 4

PROJECT NAME: Mani Site

SAMPLE NUMBER: MW- 6

WELL DESIGNA	TION. IVIVY- 6	•			·		
A. TOP OF CA	SING ELEVATION		• .				
B. DEPTH TO	GROUNDWATER	(initial):	יחדם.				
		MEAS	JKED:				
		IN (C-B):					
E. GROUNDWA	ATER ELEVATION	N (A-B):					
CASTING DIAME	TER: 2"	<u> </u>	3"		4"	OTHER	May 15
Volume (Volume (V) of 2" well – 0.1 V) of 4" well – 0.6	XV = (20 — 63 gal/ft 53 gal/ft SHEEN				ŏ	-78
ODOR WD	-	SHEENO	- FEOATII	101110500			
PUMP TYPE :	F	OLY BAILER		STAINLE	SS BAILER	mrž.	- '
		ELECTRIC X		OTHER			
PUMP DEPTH:	GALLONS PURGED 1.98 3.96 S.94	NO. OF WELL VOLUMES 1 2 3	pH 6.85 6.83	TEMP 19.9 19.3 19.1	CONDUCTIVITY (µMHOS/CM) 473.5 485.9 481.2	ORP (mV) 226 216 200	TURBIDITY (NTU) Clear Clear
RECHARGE RA SAMPLER TYPE	TE (qualitative): E: TEFL	ON BAILER	ACRYL	IC BAILER _			
SAMPLES COLI	LECTED:	PRESE	RVED VOA'S _			SERVED VOA'S	
		PRESE	RVED LITERS			SERVED LITERS	:
					ERSERVATIVE FOR	ERED:	
	·		ED:		_		
		OTHER			_		
	-		•				





Report Date: July 07, 2006

Laboratory Report

Pon Xayasaeng Winzler & Kelly Consulting Engineers 495 Tesconi Circle, Suite 9 Santa Rosa, CA 95401

Project Name: **Mani 0234305001.32002**

Lab Project: **6061603**

This 20 page report of analytical data has been reviewed and approved for release.

Mark A. Valentini, Ph.D.

Laboratory Director



TPH Gasoline in Water

Lab#	Sample ID	Compound Name		Result (µg/L)	RDL (µg/L)
6061603-01	MW-2	Gasoline		ND	50
Date Sampled:	06/15/06	Date Analyzed:	06/19/06	QC	Batch: B001171
Date Received:	06/16/06	Method:	EPA 8015M		

TPH Gasoline in Water

Lab# 6061603-02	Sample ID MW-6	Compound Name Gasoline		Result (µg/L) ND	RDL (μg/L) 50	_
Date Sampled: Date Received:	06/15/06 06/16/06	Date Analyzed: Method:	06/19/06 EPA 8015M	QC	Batch: B001171	

TPH Gasoline in Water

Lab#	Sample ID	Compound Name		Result (µg/L)	$RDL (\mu g/L)$	
6061603-03	MW-4	Gasoline		ND	50	_
Date Sampled: Date Received:	06/15/06 06/16/06	Date Analyzed: Method:	06/19/06 EPA 8015M	QC	Batch: B001171	

TPH Gasoline in Water

Lab#	Sample ID	Compound Name		Result (µg/L)	$RDL (\mu g/L)$
6061603-04	MW-1	Gasoline		98	50
Date Sampled:	06/15/06	Date Analyzed:	06/20/06	QC I	Batch: B001171
Date Received:	06/16/06	Method:	EPA 8015M		



TPH Gasoline in Water

Lab#	Sample ID	Compound Name		Result (µg/L)	RDL (µg/L)
6061603-05	MW-5	Gasoline		120	50
Date Sampled:	06/15/06	Date Analyzed:	06/20/06	QC	Batch: B001171
Date Received:	06/16/06	Method:	EPA 8015M		

Volatile Hydrocarbons by GC/MS in Water

Lab#	Sample ID	Compo	und Name		Result (µg/L)	RDL ($\mu g/L$)
6061603-01	MW-2	Benzen	e		ND	1.0
		Toluene	e		ND	1.0
		Ethylbe	nzene		ND	1.0
		m,p-Xy	lene		ND	1.0
		o-Xyler	ne		ND	1.0
		Tertiary	Butyl Alcohol (ГВА)	ND	12
		Methyl	tert-Butyl Ether (MTBE)	ND	1.0
		Di-isop	ropyl Ether (DIPI	Ε)	ND	1.0
		Ethyl te	rt-Butyl Ether (E	ТВЕ)	ND	1.0
		Tert-Ar	myl Methyl Ether	(TAME)	ND	1.0
Su	rrogates	Result (µg/L)	% Recove	ery	Acceptance Range ((%)
Dibromofluorom	nethane	22.4	112		70-130	
Toluene-d8		22.5	112		70-130	
4-Bromofluorob	enzene	15.8	79		70-130	
Date Sampled:	06/15/06		Date Analyzed:	06/21/06	QC E	Batch: B001183
Date Received:	06/16/06		Method:	EPA 8260B		



Volatile Hydrocarbons by GC/MS in Water

Lab#	Sample ID	Compo	Compound Name		Result (μ g/L)	$RDL (\mu g/L)$
6061603-02	MW-6	Benzen	e		ND	1.0
		Toluene	e		ND	1.0
		Ethylbe	nzene		ND	1.0
		m,p-Xy	lene		ND	1.0
		o-Xyler	ne		ND	1.0
		Tertiary	Butyl Alcohol (ТВА)	ND	12
		Methyl	tert-Butyl Ether ((MTBE)	ND	1.0
		Di-isop:	ropyl Ether (DIPI	E)	ND	1.0
		Ethyl te	rt-Butyl Ether (E	TBE)	ND	1.0
		Tert-An	myl Methyl Ether	(TAME)	ND	1.0
Sui	rogates	Result (µg/L)	% Recove	ery	Acceptance Range	(%)
Dibromofluorom	ethane	22.6	113		70-130	
Toluene-d8		22.8	114		70-130	
4-Bromofluorobe	enzene	15.6	78		70-130	
Date Sampled:	06/15/06		Date Analyzed:	06/21/06	QC I	Batch: B001183
Date Received:	06/16/06		Method:	EPA 8260B		

Volatile Hydrocarbons by GC/MS in Water

Lab#	Sample ID	Compo	Compound Name		Result (µg/L)	$RDL (\mu g/L)$
6061603-03	MW-4	Benzen	e		ND	1.0
		Toluene	e		ND	1.0
		Ethylbe	nzene		ND	1.0
		m,p-Xy	lene		ND	1.0
		o-Xyler	ne		ND	1.0
		Tertiary	Butyl Alcohol (ГВА)	ND	12
		Methyl	tert-Butyl Ether (MTBE)	ND	1.0
		Di-isop:	ropyl Ether (DIPI	Ε)	ND	1.0
		Ethyl te	ert-Butyl Ether (E'	TBE)	ND	1.0
		Tert-An	nyl Methyl Ether	(TAME)	ND	1.0
Sur	rrogates	Result (µg/L)	% Recove	ery _	Acceptance Range (%)
Dibromofluorom	ethane	22.5	112		70-130	
Toluene-d8		22.7	114		70-130	
4-Bromofluorobe	enzene	15.7	78		70-130	
Date Sampled:	06/15/06		Date Analyzed:	06/21/06	QC B	atch: B001183
Date Received:	06/16/06		Method:	EPA 8260B		

Lab Project#: 6061603 CA Lab Accreditation #: 2303



Volatile Hydrocarbons by GC/MS in Water

Lab#	Sample ID	Compo	und Name		Result (µg/L)	$RDL (\mu g/L)$
6061603-04	MW-1	Benzen	e		ND	1.0
		Toluene	e		ND	1.0
		Ethylbe	enzene		2.5	1.0
		m,p-Xy	lene		1.7	1.0
		o-Xyler	ne		ND	1.0
		Tertiary	Butyl Alcohol (ГВА)	ND	12
		Methyl	tert-Butyl Ether ((MTBE)	ND	1.0
		Di-isop	ropyl Ether (DIPI	Ε)	ND	1.0
		Ethyl te	ert-Butyl Ether (E'	TBE)	ND	1.0
		Tert-Ar	nyl Methyl Ether	(TAME)	ND	1.0
Su	rrogates	Result (µg/L)	% Recove	ery	Acceptance Range (9	%)
Dibromofluoron	nethane	22.6	113		70-130	
Toluene-d8		23.0	115		70-130	
4-Bromofluorob	enzene	15.9	80		70-130	
Date Sampled:	06/15/06		Date Analyzed:	06/21/06	QC Ba	atch: B001183
Date Received:	06/16/06		Method:	EPA 8260B		

Volatile Hydrocarbons by GC/MS in Water

Lab#	Sample ID	Compo	Compound Name			$RDL (\mu g/L)$
6061603-05	MW-5	Benzen	e		ND	1.0
		Toluene	e		ND	1.0
		Ethylbe	enzene		ND	1.0
		m,p-Xy	lene		ND	1.0
		o-Xyleı	ne		ND	1.0
		Tertiary	Butyl Alcohol (ГВА)	ND	12
		Methyl	tert-Butyl Ether (MTBE)	2.2	1.0
		Di-isop	ropyl Ether (DIPI	Ε)	ND	1.0
		Ethyl te	ert-Butyl Ether (E	ТВЕ)	ND	1.0
		Tert-Aı	myl Methyl Ether	(TAME)	ND	1.0
Sur	rogates	Result (µg/L)	% Recove	ery	Acceptance Range	e (%)
Dibromofluorom	ethane	22.2	111		70-130	
Toluene-d8		22.7	114		70-130	
4-Bromofluorobe	enzene	15.7	78		70-130	
Date Sampled:	06/15/06		Date Analyzed:	06/21/06	QC	C Batch: B001183
Date Received:	06/16/06		Method:	EPA 8260B		



TPH Diesel in Water

Lab#	Sample ID	Compound Name		Result (µg/L)	$RDL (\mu g/L)$
6061603-01	MW-2	Diesel		ND	50
Date Sampled:	06/15/06	Date Analyzed:	06/24/06	QC	Batch: B001178
Date Received:	06/16/06	Method:	EPA 8015M		

TPH Diesel in Water

Lab#	Sample ID	Compound Name		Result (µg/L)	RDL (µg/L)	_
6061603-02	MW-6	Diesel		ND	50	
Date Sampled:	06/15/06	Date Analyzed:	06/24/06	QC	Batch: B001178	
Date Received:	06/16/06	Method:	EPA 8015M			

TPH Diesel in Water

Lab#	Sample ID	Compound Name		Result (µg/L)	$RDL (\mu g/L)$	
6061603-03	MW-4	Diesel		ND	50	•
Date Sampled: Date Received:	06/15/06 06/16/06	Date Analyzed: Method:	06/24/06 EPA 8015M	QC	Batch: B001178	

TPH Diesel in Water

Lab#	Sample ID	Compound Name		Result (µg/L)	$RDL (\mu g/L)$
6061603-04	MW-1	Diesel		ND	50
Date Sampled:	06/15/06	Date Analyzed:	06/24/06	QC I	Batch: B001178
Date Received:	06/16/06	Method:	EPA 8015M		



TPH Diesel in Water

Lab#	Sample ID	Compound Name		Result (µg/L)	RDL (μg/L)
6061603-05	MW-5	Diesel		ND	50
Date Sampled:	06/15/06	Date Analyzed:	06/24/06	QC	Batch: B001178
Date Received:	06/16/06	Method:	EPA 8015M		

Nitrate as Nitrogen in Water

Lab# 6061603-01	Sample ID MW-2	Compound Name Nitrate as N		Result (mg/L)	RDL (mg/L)
Date Sampled: Date Received:	06/15/06 06/16/06	Date Analyzed: Method:	06/16/06 EPA 300.0	QC	Batch: B001153

Nitrate as Nitrogen in Water

Lab#	Sample ID	Compound Name		Result (mg/L)	RDL (mg/L)
6061603-02	MW-6	Nitrate as N		1.5	0.50
Date Sampled: Date Received:	06/15/06 06/16/06	Date Analyzed: Method:	06/16/06 EPA 300.0	QC	Batch: B001153

Nitrate as Nitrogen in Water

Lab#	Sample ID	Compound Name		Result (mg/L)	RDL (mg/L)
6061603-03	MW-4	Nitrate as N		1.1	0.10
Date Sampled:	06/15/06	Date Analyzed:	06/16/06		QC Batch: B001153
Date Received:	06/16/06	Method:	EPA 300.0		



Nitrate as Nitrogen in Water

Lab#	Sample ID	Compound Name		Result (mg/L)	RDL (mg/L)
6061603-04	MW-1	Nitrate as N		2.3	0.50
Date Sampled:	06/15/06	Date Analyzed:	06/16/06	(QC Batch: B001153
Date Received:	06/16/06	Method:	EPA 300.0		

Nitrate as Nitrogen in Water

Lab#	Sample ID MW-5	Compound Name Nitrate as N		Result (mg/L) 0.36	RDL (mg/L) 0.10
Date Sampled: Date Received:	06/15/06 06/16/06	Date Analyzed: Method:	06/16/06 EPA 300.0	QCI	Batch: B001153

Nitrite as Nitrogen in Water

Lab#	Sample ID	Compound Name		Result (mg/L)	RDL (mg/L)
6061603-01	MW-2	Nitrite as N		ND	0.10
Date Sampled: Date Received:	06/15/06 06/16/06	Date Analyzed: Method:	06/16/06 EPA 300.0	QC E	Batch: B001153

Nitrite as Nitrogen in Water

Lab#	Sample ID	Compound Name		Result (mg/L)	RDL (mg/L)	
6061603-02	MW-6	Nitrite as N		ND	0.10	_
Date Sampled:	06/15/06	Date Analyzed:	06/16/06	QC 1	Batch: B001153	
Date Received:	06/16/06	Method:	EPA 300.0			



Nitrite as Nitrogen in Water

Lab#	Sample ID	Compound Name		Result (mg/L)	RDL (mg/L)
6061603-03	MW-4	Nitrite as N		ND	0.10
Date Sampled:	06/15/06	Date Analyzed:	06/16/06	(QC Batch: B001153
Date Received:	06/16/06	Method:	EPA 300.0		

Nitrite as Nitrogen in Water

Lab#	Sample ID	Compound Name		Result (mg/L)	RDL (mg/L)
6061603-04	MW-1	Nitrite as N		ND	0.10
Date Sampled:	06/15/06	Date Analyzed:	06/16/06	QC I	Batch: B001153
Date Received:	06/16/06	Method:	EPA 300.0		

Nitrite as Nitrogen in Water

Lab#	Sample ID	Compound Name		Result (mg/L)	RDL (mg/L)
6061603-05	MW-5	Nitrite as N		ND	0.10
Date Sampled: Date Received:	06/15/06 06/16/06	Date Analyzed: Method:	06/16/06 EPA 300.0	QC	Batch: B001153

Ammonia as Nitrogen in Water

Lab#	Sample ID	Compound Name		Result (mg/L)	RDL (mg/L)	
6061603-01	MW-2	Ammonia as N		ND	0.2	-
Date Sampled:	06/15/06	Date Analyzed:	06/28/06	QC	Batch: B001214	
Date Received:	06/16/06	Method:	EPA 350.3			



Ammonia as Nitrogen in Water

Lab#	Sample ID	Compound Name		Result (mg/L)	RDL (mg/L)	
6061603-02	MW-6	Ammonia as N		ND	0.2	_
Date Sampled:	06/15/06	Date Analyzed:	06/28/06	QC	Batch: B001214	
Date Received:	06/16/06	Method:	EPA 350.3			

Ammonia as Nitrogen in Water

Lab# 6061603-03	Sample ID MW-4	Compound Name Ammonia as N		Result (mg/L) ND	RDL (mg/L) 0.2	_
Date Sampled: Date Received:	06/15/06 06/16/06	Date Analyzed: Method:	06/28/06 EPA 350.3	QC	Batch: B001214	

Ammonia as Nitrogen in Water

Lab#	Sample ID	Compound Name		Result (mg/L)	RDL (mg/L)
6061603-04	MW-1	Ammonia as N		ND	0.2
Date Sampled: Date Received:	06/15/06 06/16/06	Date Analyzed: Method:	06/28/06 EPA 350.3	QC	Batch: B001214

Ammonia as Nitrogen in Water

MW-5 Ammonia as N ND 0.2 Date Sampled: 06/15/06 Date Analyzed: 06/28/06 QC Batch: B001214 Date Received: 06/16/06 Method: EPA 350 3	Lab#	Sample ID	Compound Name		Result (mg/L)	RDL (mg/L)	
	6061603-05	MW-5	Ammonia as N		ND	0.2	-
Date Received: 06/16/06 Method: EPA 350 3	Date Sampled:	06/15/06	Date Analyzed:	06/28/06	QO	C Batch: B001214	
2111000	Date Received:	06/16/06	Method:	EPA 350.3			



Phosphate in Water

Lab#	Sample ID	Compound Name		Result (mg/L)	RDL (mg/L)
6061603-01	MW-2	Phosphate		ND	0.10
Date Sampled:	06/15/06	Date Analyzed:	06/16/06	Q	C Batch: B001153
Date Received:	06/16/06	Method:	EPA 300.0		

Phosphate in Water

Lab# 6061603-02	Sample ID MW-6	Compound Name Phosphate		Result (mg/L) ND	RDL (mg/L) 0.10	
Date Sampled: Date Received:	06/15/06 06/16/06	Date Analyzed: Method:	06/16/06 EPA 300.0	QC I	Batch: B001153	

Phosphate in Water

Lab#	Sample ID	Compound Name		Result (mg/L)	RDL (mg/L)
6061603-03	MW-4	Phosphate		ND	0.10
Date Sampled: Date Received:	06/15/06 06/16/06	Date Analyzed: Method:	06/16/06 EPA 300.0	QC I	Batch: B001153

Phosphate in Water

Lab#	Sample ID	Compound Name		Result (mg/L)	RDL (mg/L)	
6061603-04	MW-1	Phosphate		ND	0.10	_
Date Sampled:	06/15/06	Date Analyzed:	06/16/06	QC	Batch: B001153	
Date Received:	06/16/06	Method:	EPA 300.0			



Phosphate in Water

Lab#	Sample ID	Compound Name		Result (mg/L)	RDL (mg/L)			
6061603-05	MW-5	Phosphate		ND	0.10			
Date Sampled:	06/15/06	Date Analyzed:	06/16/06	OC Batch: B001153				
Date Received:	06/16/06	Method:	EPA 300.0		QC Batch. Boot133			



Quality Assurance Report

TPH Gasoline in Water

Analyte	D 1	Reporting	T T **	Spike	Source	0/ DEC	%REC	DDD	RPD	NT /
Allaryte	Result	t Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch B001171 - EPA 5030 GC										
Blank (B001171-BLK1)				Prepared & Analyzed: 06/19/06						
Gasoline	ND	50	$\mu g/L$							
Matrix Spike (B001171-MS1)	Source: 6061603-01			Prepared & Analyzed: 06/19/06						
Benzene	9.25	0.50	μg/L	10.0	ND	92	70-130			
Toluene	9.61	0.50	$\mu g/L$	10.0	ND	96	70-130			
Ethylbenzene	9.54	0.50	μg/L	10.0	ND	95	70-130			
Xylenes	29.7	1.5	$\mu g/L$	30.0	ND	99	70-130			
Matrix Spike Dup (B001171-MSD1)		Source: 6061603	3-01	Prepared	: 06/19/06	Analyze	ed: 06/22/0)6		
Benzene	9.38	0.50	μg/L	10.0	ND	94	70-130	2	20	
Toluene	9.67	0.50	μg/L	10.0	ND	97	70-130	1	20	
Ethylbenzene	9.39	0.50	μg/L	10.0	ND	94	70-130	1	20	
Xylenes	29.4	1.5	μg/L	30.0	ND	98	70-130	1	20	



Volatile Hydrocarbons by GC/MS in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch B001183 - EPA 5030 GC/MS											
Blank (B001183-BLK1)				Prepared: 06/20/06 Analyzed: 06/21/06							
Benzene	ND	1.0	μg/L								
Toluene	ND	1.0	$\mu g/L$								
Ethylbenzene	ND	1.0	$\mu g/L$								
m,p-Xylene	ND	1.0	$\mu g/L$								
o-Xylene	ND	1.0	μg/L								
Tertiary Butyl Alcohol (TBA)	ND	12	μg/L								
Methyl tert-Butyl Ether (MTBE)	ND	1.0	μg/L								
Di-isopropyl Ether (DIPE)	ND	1.0	μg/L								
Ethyl tert-Butyl Ether (ETBE)	ND	1.0	μg/L								
Tert-Amyl Methyl Ether (TAME)	ND	1.0	μg/L								
Surrogate: Dibromofluoromethane	22.6		μg/L	20.0		113	70-130				
Surrogate: Toluene-d8	22.5		$\mu g/L$	20.0		112	70-130				
Surrogate: 4-Bromofluorobenzene	15.6		$\mu g/L$	20.0		78	70-130				
Matrix Spike (B001183-MS1)	Se	ource: 6061603	3-01	Prepared	: 06/20/06	Analyze	ed: 06/21/0)6			
1,1-Dichloroethene (1,1-DCE)	25.7	1.0	$\mu g/L$	25.0	ND	103	70-130				
Benzene	28.2	1.0	$\mu g/L$	25.0	ND	113	70-130				
Trichloroethene (TCE)	28.2	1.0	$\mu g/L$	25.0	ND	113	70-130				
Toluene	29.2	1.0	$\mu g/L$	25.0	ND	117	70-130				
Chlorobenzene	26.8	1.0	μg/L	25.0	ND	107	70-130				
Surrogate: Dibromofluoromethane	22.3		μg/L	20.0		112	70-130				
Surrogate: Toluene-d8	22.8		μg/L	20.0		114	70-130				
Surrogate: 4-Bromofluorobenzene	15.9		$\mu g/L$	20.0		80	70-130				
Matrix Spike Dup (B001183-MSD1)	Se	ource: 6061603	3-01	Prepared	: 06/20/06	Analyze	ed: 06/21/0)6			
1,1-Dichloroethene (1,1-DCE)	24.6	1.0	$\mu g/L$	25.0	ND	98	70-130	5	20		
Benzene	27.6	1.0	$\mu g/L$	25.0	ND	110	70-130	3	20		
Trichloroethene (TCE)	27.1	1.0	$\mu g/L$	25.0	ND	108	70-130	5	20		
Toluene	28.5	1.0	$\mu g/L$	25.0	ND	114	70-130	3	20		
Chlorobenzene	26.0	1.0	μg/L	25.0	ND	104	70-130	3	20		
Surrogate: Dibromofluoromethane	22.5		μg/L	20.0		112	70-130				
Surrogate: Toluene-d8	22.7		μg/L	20.0		114	70-130				
Surrogate: 4-Bromofluorobenzene	15.7		μg/L	20.0		78	70-130				

Lab Project#: 6061603



TPH Diesel in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B001178 - EPA 3510C										
Blank (B001178-BLK1)				Prepared	: 06/20/06	Analyze	ed: 06/24/0)6		
Diesel	ND	50	$\mu g/L$							
LCS (B001178-BS1)				Prepared	: 06/20/06	Analyze	ed: 06/24/0)6		
Diesel	3070	50	$\mu g/L$	2740		112	65-135			
LCS Dup (B001178-BSD1)	Prepared: 06/20/06 Analyzed: 06/24/06									
Diesel	3280	50	μg/L	2740		120	65-135	7	30	



Nitrate as Nitrogen in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B001153 - Default Prep GenCh	em									
Blank (B001153-BLK1)				Prepared	& Analyz	ed: 06/13	3/06			
Nitrate as N	ND	0.10	mg/L							
LCS (B001153-BS1)				Prepared	& Analyz	ed: 06/13	3/06			
Nitrate as N	0.444	0.10	mg/L	0.452		98	80-120			
LCS Dup (B001153-BSD1)				Prepared	& Analyz	zed: 06/13	3/06			
Nitrate as N	0.429	0.10	mg/L	0.452	_	95	80-120	3	20	



Nitrite as Nitrogen in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B001153 - Default Prep GenCho	em									
Blank (B001153-BLK1)	Prepared & Analyzed: 06/13/06									
Nitrite as N	ND	0.10	mg/L							
LCS (B001153-BS1)				Prepared	& Analyz	ed: 06/13	3/06			
Nitrite as N	0.150	0.10	mg/L	0.152		99	80-120			
LCS Dup (B001153-BSD1)	Prepared & Analyzed: 06/13/06									
Nitrite as N	0.152	0.10	mg/L	0.152		100	80-120	1	20	



Ammonia as Nitrogen in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B001214 - Default Prep GenCho	em									
Blank (B001214-BLK1)	Prepared & Analyzed: 06/28/06									
Ammonia as N	ND	0.2	mg/L							
LCS (B001214-BS1)				Prepared	& Analyz	zed: 06/28	3/06			
Ammonia as N	1.0	0.2	mg/L	1.00		100	70-130			
LCS Dup (B001214-BSD1)	Prepared & Analyzed: 06/28/06									
Ammonia as N	1.0	0.2	mg/L	1.00		100	70-130	0	20	



Phosphate in Water

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B001153 - Default Prep GenCho	em									
Blank (B001153-BLK1)	Prepared & Analyzed: 06/13/06									
Phosphate	ND	0.10	mg/L							
LCS (B001153-BS1)				Prepared	& Analyz	zed: 06/13	3/06			
Phosphate	2.88	0.10	mg/L	3.00		96	70-130			
LCS Dup (B001153-BSD1)	Prepared & Analyzed: 06/13/06									
Phosphate	2.95	0.10	mg/L	3.00	_	98	70-130	2	20	



Notes and Definitions

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

RPD Relative Percent Difference

51 SAMPLE . 3 6 7 0234305001.32002 0 GLOBAL ID: TOGO 200 725 COOLER TEMPERATURE GEOTRACKER EDF: X Y. 606 (603 10 COMMENTS Bus Ice CHAIN OF CUSTODY PAGE 200 3/mge WINZLER & KELLY PROJECT NAME: WINZLER & KELLY PROJECT NUMBER: LAS PROJECT NUMBER: TURNAROUND THE Johnsk one) 24 Hours NORMAL SEMI-VOLATILE HYDROCARBONS HYDROCARBONS HYDROCARBONS OXYGENATED FUEL ADDITIVES SUGNATURES 5 DAYS 48 HOURS HOBILE LAB SAME DAY YOLATRE WYDAGCAREO WALES AND INCL enny lastansty 75.51 13.54 MSIDE VAR TERRET 90|S||9 COMPANY NAME: WINZLEN & KELLY CONSULTING ENGINEERS PRESV. Analytical Sciences P.O. Box 780356, Petaluma, CA 94975-0336 110 Liberty Street, Petaluma, CA 94952 (707) 769-5128 - 80 - E SANTA ROSA, CA 95401-4696 ADDRESS: 495 TESCONI CIRCLE, SUITE 9 CLIENT INFORMATION MATERIX SAMPLED BY: Fax (707) 769-5093 5 6 5 7/18 cz. Ĕ PHONE#: (707) 523-1010 FAX #: (707) 527-8679 DATE CLIENT SAMPLE 1.D. CONTACT: ALD-RELINGUISHED BY: 3 3 X MA 2



Electronic Submittal Information

Main Menu | View/Add Facilities | Upload EDD | Check EDD

UPLOADING A GEO_REPORT FILE

YOUR DOCUMENT UPLOAD WAS SUCCESSFUL!

Facility Name:

MANI, RICHARD

Global ID:

T0609700725

Report

Title:

Annual/1st Qtr 2006 Groundwater Monitoring

Document Type:

Monitoring Report - Annual

Submittal Type:

GEO_REPORT

Submittal Date/Time: 6/26/2006 5:01:24 PM

Confirmation

Number:

1885328531

Click here to view the document.

Back to Main Menu

Logged in as WINZLER (AUTH_RP)

CONTACT SITE ADMINISTRATOR.

Electronic Submittal Information

Main Menu | View/Add Facilities | Upload EDD | Check EDD

Your EDF file has been successfully uploaded!

Confirmation Number: 5614850044

Date/Time of Submittal: 6/26/2006 4:38:13 PM

Facility Global ID: T0609700725

Facility Name: MANI, RICHARD

Submittal Title: 1st Qtr 2006 EDF Report 6042101 Submittal Type: Additional Information Report

Electronic Submittal Information

Main Menu | View/Add Facilities | Upload EDD | Check EDD

UPLOADING A GEO_WELL FILE

Processing is complete. No errors were found! Your file has been successfully submitted!

Submittal Title:

2nd Qtr 2006 Well Measurement File, Mani

Submittal Date/Time: 6/26/2006 5:11:07 PM

Confirmation

7837995767

Number:

Back to Main Menu

Logged in as WINZLER (AUTH_RP)

CONTACT SITE ADMINISTRATOR.